

# SOCIAL SECURITY DEVELOPMENT AND REFORM

## AROUND THE WORLD

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## SOCIAL SECURITY DEVELOPMENT AND REFORM AROUND THE WORLD

Social security reform is occurring in many countries around the world. To survey social security development and reform, this article divides the world into six regions: Africa; Asia and the Pacific; the Middle East; Latin America and the Caribbean; Central and Eastern Europe and Central Asia; and the high income countries of the OECD. The article focuses on the issues of extending coverage in low income countries, social security privatization, and reforms to deal with the effects of population aging.

## SUMMARY

This article surveys the development and reform of social security around the world. To do so, it divides the world into six regions: Africa; Asia and the Pacific; the Middle East; Latin America and the Caribbean; Central and Eastern Europe and Central Asia; and the high income countries of the OECD. The article focuses on the issues of extending coverage in low income countries, social security privatization, and reforms to deal with the effects of population aging.

Africa is the poorest region of the world and has the youngest and least developed social security programs. The relatively high prevalence of HIV/AIDS in some sub-Saharan countries and internal armed conflicts in others have created difficult problems in some countries for the social security programs. Some countries do not have functioning social security programs. The social security programs in Africa are influenced by their colonial heritage, with the programs in English-speaking Africa differing from those in French-speaking Africa.

Asia and the Pacific contain a number of countries with provident funds, which are national mandatory savings funds. These programs typically provide lump sum benefits and thus do not provide annuity protection against outliving one's resources. Because of the influence of Confucian philosophy with its emphasis on family responsibility for elders, countries in the region have been relatively slow in developing social security programs. China does not have a social security program for workers who do not work for the government or in government owned enterprises.

The countries of the Middle East all have traditional defined benefit social security programs. For the most part, these programs are relatively little affected by population aging. They tend to have low retirement ages and some of the wealthy countries of the region provide very generous benefits.

Latin America was a pioneer in the early development of social security outside of Europe. At the end of the twentieth century, following the lead of Chile, it was again a pioneer in the development of privately managed mandatory individual accounts as a replacement of part or all of traditional defined benefit social security systems. These plans replaced pay-as-you-go benefits with benefits that were fully funded, but the retirement benefits of workers are subject to financial market risks and risks due to fluctuations in interest rates in annuity markets.

The countries of Central and Eastern Europe and Central Asia are in a process of transition, and a number of them have adopted or are considering funded defined contribution plans as part of their social security systems. The systems they had during the period of Communism were not prepared to deal with the high inflation that some of the countries experienced during the transition.

The countries of the OECD are dealing with the effects of population aging on the financing of their traditional defined benefit social security systems. They have made a number of reforms to reduce benefits and raise retirement age or to encourage delayed retirement. A number have partially privatized their social security systems.

Countries provide social security old-age benefits in remarkably diverse ways, reflecting differences in level of development and historical experience. The differences also are caused by political philosophies and cultural differences concerning the roles of individual responsibility, family, employers, capital markets, and government. Social security old-age benefits programs are provided by at least 172 countries (US SSA 1999).

Because of the diverse ways social security old-age benefits are provided, it is necessary to consider what constitutes such a program. Essential elements include that they are employment-related, they provide cash benefits in old age, they are provided by statute, and they are mandatory, it being generally thought that many workers would save inadequately for retirement on their own.

The diversity of mandatory old-age benefit programs can be seen by examining the major types of programs (Table 1).

1. The large majority of countries provide old-age benefits through a defined benefit social security system based on principles of social insurance, where workers contribute and receive a benefit linked to their earnings. In a defined benefit program, benefits are calculated using a benefit formula usually based on the number of years of contributions and the worker's earnings.
2. An increasing number of countries provide benefits through a mandatory individual account defined contribution program. In a defined contribution program, benefits are based on the contributions to the worker's individual account and the investment earnings on the funds in the account. A number of countries in Latin America adopted these programs during the 1990s.

3. A number of countries that were formerly British colonies have provident funds. These provident funds are mandatory savings plans that are fully funded and managed by governmental organizations. While other types of social security programs generally offer survivors and disability benefits and provide benefits as an annuity, provident funds usually only provide a lump sum retirement benefit.
4. Notional account plans are a relatively new type of plan, recently adopted by Italy, Latvia, Poland and Sweden. Each worker has an individual account but the accounts are financed on a pay-as-you-go basis rather than being funded. A contribution is attributed to each worker's account as a bookkeeping entry. The return that is credited on the accumulated bookkeeping balance in each worker's account takes into consideration current and prospective demographic and productivity change.
5. Some countries give workers the option of contributing to a state-run plan versus contributing to a private-sector managed plan. This approach is often called "contracting out," but is also called "opting out" or a "voluntary carve out." Workers or employers can choose between the state-run program and a private sector program. This approach is used by Peru with respect to its individual accounts system, by Japan and the United Kingdom with respect to their defined benefit social security system, and by India with respect to its Employees' Provident Fund.
6. Some countries mandate employer-provided pension plans, an approach used by Australia and Switzerland. Under a mandate, employers are required to

provide to their employees pension plans meeting minimum requirements.

These mandated plans can be either defined benefit or defined contribution plans, and in Switzerland cash balance plans are commonly used, which are a hybrid plan combining features of both defined benefit and defined contribution plans.

7. Some countries have quasi-mandating of employer-provided plans, where the mandate is not a legal requirement imposed by the state but is the result of a contractual agreement between labor unions and employers that covers most workers in the country. This approach only is feasible in countries with widespread coverage of workers by unions or where union negotiated pension arrangements can be required to be extended to non-unionized employers in the same industry. The Netherlands and Sweden are examples of this approach.
8. Some countries provide flat benefits that are not tied to earnings or to past contributions but may increase with years of contributions, or may be financed out of government general revenue. These benefits may be means tested. Ireland and Mauritius are examples. These benefits may be universal, provided to all citizens or residents who have met requirements as to length of time in the country. Canada is an example.
9. Finally, some countries, such as Sweden and Poland, combine two or sometimes three of these approaches.

While this survey could be organized by type of program, it was decided to organize it by geographic region. Though large differences in features of social security programs are found

within each region of the world, general similarities as to program type prevail within the regions. In order to group countries that are somewhat similar in economic and demographic situation as well as type of old-age benefits program, this survey divides the world into five geographic regions--Africa; Asia and the Pacific; the Middle East; Latin America and the Caribbean; Central and Eastern Europe and Central Asia—plus a sixth group, the high income countries of the OECD (Organization for Economic Cooperation and Development). The OECD facilitates economic cooperation among the countries with the most developed economies. Its newest member countries-- Czech Republic, Hungary, Poland, Mexico and South Korea-- are included in the discussion of their geographic regions.

The survey has global geographic scope but of necessity is selective in other respects, based on judgment as to the importance of various topics. It places greater emphasis on large countries than small ones because of their greater importance in the provision of social protection around the world. Because the majority of workers around the world lack social security, for low income countries, where low coverage is particularly a problem, this survey discusses coverage issues. For middle income countries, particular attention is paid to the social security privatization movement. Social security privatization involves the private sector, rather than governmental, management of social security programs (Turner and Rajnes 1998). While population aging is occurring in all regions of the world, the countries with the oldest populations are found in the OECD region. In the OECD countries, the focus is on policies to insure financial solvency in the face of population aging. In all regions, the diversity of approaches is highlighted.

Though precise data are unavailable on social security coverage rates around the world, the regions are discussed roughly in the order of the level of coverage of the workforce provided by the social security systems in the region, which is a measure of their development.

## Africa

Africa is the poorest region of the world. It has 25 of the world's 35 least developed countries. Half of all Africans are poor. In sub-Saharan Africa, nearly 75 percent of the labor force works outside the formal economy, often in subsistence agriculture. Measured unemployment rates in urban areas are over 20 percent in many countries, with hidden unemployment and underemployment causing the percent of the workforce that is underemployed to be even higher (Gillion, Turner, Bailey and Latulippe 2000). Because of high fertility rates and low life expectancies, Africa has the youngest population of the different regions, and will have a young population for many years. Thus, populating aging is not a problem for social security financing.

HIV/AIDS is devastating some countries in sub-Saharan Africa, where nine countries have 14 percent or more of their population aged 15 to 49 affected. Of the 34 million people worldwide with AIDS, 24.5 million live in sub-Saharan Africa, and the impact of AIDS in Africa is expected to intensify over the next decade. AIDS is the worst in Botswana, Zimbabwe, Namibia, Swaziland and South Africa. In Swaziland and Zimbabwe, 25 percent of adults have AIDS, and in Botswana the figure is 36 percent (United Nations 2001). Because it is mainly people of working age that are dieing from AIDS, it is destroying the economic base supporting social security. Some countries in Africa have also suffered severe problems from drought, flooding, and armed conflict between ethnic groups.

On average social security programs in Africa cover only 10 percent of workers. Most workers not covered rely on extended families for support when they can no longer work. In Benin, only 5 percent of workers are covered. Though all countries in Africa provide retirement benefits for government workers, a handful of countries have no old-age benefit program for workers in the private sector (Gillion, Turner, Bailey and Latulippe 2000).

Six distinct patterns of social security protection have developed in Africa, reflecting different colonial traditions and international influences, but also in some countries reflecting the effects of armed conflicts (Gillion, Turner, Bailey and Latulippe 2000). First, North Africa, where the proximity to Europe was a major influence, has the oldest and most comprehensive programs of social protection, with defined benefit social security pensions based on social insurance principles operating in Algeria, Egypt, Libya, Morocco and Tunisia since the 1950s. To encourage coverage among agricultural workers, who are typically more difficult to bring into the social security system, Tunisia charges agricultural workers a lower contribution rate than urban workers. To encourage coverage among self-employed workers, Egypt allows them to declare their earnings level, with the minimum level varying by occupation.

Second, a number of French-speaking West African countries established a voluntary plan during the colonial period – the West African Retirement Pensions Fund - but did not introduce compulsory programs until after independence, between 1960 and 1965. Given their common heritage and close collaboration since independence, Côte D'Ivoire, Mali and other countries in the region have similar programs based on defined benefits. Benefits are determined by the worker's length of service and average earnings, with early retirement benefits available at age 50.

Third, in the countries that were British colonies, social security programs are generally more modest than those in French-speaking Africa. Provident funds were established in most of these countries—Gambia, Ghana, Kenya, Nigeria, Seychelles, Swaziland, Tanzania, Uganda and Zambia. The first was established in Nigeria in 1961.

Many of the provident funds have provided low benefits, due to high administrative costs, low or negative rates of return, and the failure to raise earnings ceilings for the programs. Motivated by the failure to provide adequate benefits, many countries have converted them into defined benefit social security systems. The small Seychelles plan was the first, in the late 1970s. The provident fund in Ghana provided low benefits during the 1980s that resulted from negative real rates of return received by the fund. It was converted in 1991. Since then, most of the remaining provident funds in Africa have also converted to defined benefit programs. In Nigeria, the failure to increase the ceiling on wages subject to social security mandatory contributions led to low benefits. Nigeria converted in 1994. Both Tanzania and Gambia enacted legislation to convert in 1997. Proposals for conversion have also been considered in Kenya and Uganda.

Fourth, particularly in southern Africa—Botswana, Lesotho, Malawi, Namibia, Swaziland and Zimbabwe--the development of social security pensions was considerably delayed. After years of debate, the national social security institute was established in Zimbabwe in 1990. Initially, the program focused on workers' compensation, but subsequently legislation was passed to establish a social security old-age benefits program. Botswana established a social security program in 1996.

Fifth, some countries do not have a social security program for private sector workers. These countries include Eritrea, Ethiopia, Democratic Republic of the Congo, Lesotho, Sierra

Leone, and Somalia. In Sierra Leone, efforts to establish a social security program have been stalled by internal armed conflicts. Internal and external conflict has also delayed the development of social security programs in Eritrea, Ethiopia and Somalia. In Liberia, the Republic of Congo and the Democratic Republic of the Congo, social security programs have been substantially destroyed by armed conflicts.

Six, at the other end of the coverage spectrum, several countries have introduced social security programs emphasizing universality. Entitlement to a basic pension at age 65 in South Africa is based on a means test and the benefits are financed from general taxation. The program in Mauritius provides a basic pension to all residents in old age without a means test, supplemented by earnings-related benefits. Seychelles has a similar program. Gabon has made a special effort to extend coverage. In 1983, it developed a social security program for non-salaried workers and the unemployed. This program is separate from the formal sector program and is administered by a separate institution. Botswana has a universal flat-rate pension scheme for all residents aged 65 and older.

#### Asia and the Pacific

Population aging will affect Asia more than any other region in the coming decades. While Asia accounted for 28 percent of the world's population aged 60 and older in 1985, that percentage will more than double to 58 percent in 2050 (United Nations 2001).

The extended family is fundamental to most Asian societies. Most elderly live with one or more of their children. The traditional Confucian values that emphasize family responsibility for the economic support of elderly people have slowed the development of social security programs. A national social security program was only introduced in South Korea in 1988 and

in Thailand in 1998. Because with urbanization and declining fertility rates, families are becoming smaller and more dispersed, increasingly social security benefits supplement traditional family support. Social security in this region varies considerably in coverage, but generally tends to provide lower coverage than in other parts of the world at comparable levels of economic development.

A striking feature of this region is the large number of countries with no mandatory defined benefit social security program. Most of these countries are former British colonies that provide provident funds. Brunei, India, Indonesia, Malaysia, Nepal, Papua New Guinea, Singapore, and Sri Lanka provide old-age benefits through provident funds (Gillion, Turner, Bailey and Latulippe 2000)..

In India, the Employee's Provident Fund was introduced in 1952 to cover employees in formal employment. In 1995, India partially converted the Fund into a defined benefit pension plan. Approximately 50 percent of contributions to it are used to finance a defined benefit annuity payable through the Employee's Pension Scheme. This program, however, betrays its provident fund origins in that one-third of the pension entitlement can be taken as a lump sum benefit, even though workers already have access to the balance of their provident fund in the form of a lump sum benefit. Workers in enterprises covering less than 20 employees, who are a large part of the workforce, are excluded from the system.

Lump sum benefits typically provided by provident funds do not protect against the risk of a retired person outliving his or her income. This problem is increasingly acknowledged among the countries with national provident funds. The Fiji National Provident Fund offers its members a choice between a lump sum benefit and a life annuity. In spite of the annuity being offered on very favorable terms, only about 10 percent of members choose that option. Other

countries have recognized that compulsion is necessary. Singapore has decided that members of its Central Provident Fund must set aside a minimum sum in their retirement account at age 55 to finance an annuity benefit (Gillion, Turner, Bailey and Latulippe 2000).

Countries in the region less exposed to British influence have generally established defined benefit social insurance pension programs to cover employees. These include countries as diverse as South Korea, Pakistan, the Philippines, and Viet Nam. Pakistan, despite its strong British connections, opted for a defined benefit social insurance program in 1976. This choice may reflect the influence of the Arab countries, almost all of which have such programs.

The social security programs in this region usually exclude the self-employed, and often exclude many employees, for example those in enterprises with ten or fewer workers in Indonesia. Expanding coverage is widely regarded as a priority, and in this regard useful experience has been gained by the example of Malaysia, which has extended coverage to all employees regardless of the size of the enterprise employing them.

Extension of social security pension coverage to self-employed workers is perhaps the greatest challenge in the region. South Korea took this step in 1995 by obliging farmers, fishers and rural self-employed to contribute 3 percent of earnings, a rate which is increased 3 percent every five years until it reaches 9 percent. In Viet Nam, certain groups have, with the guidance of the government, established pension plans for their members. These include both urban informal sector workers who are members of cooperatives and rural workers who are members of the Farmers' Union. In the farmers' program, farmers make an annual contribution of 80 kilos of rice, entitling them to approximately 6 kilos of rice per month when they are eligible to retire (Gillion, Turner, Bailey and Latulippe 2000).

Several countries in Asia are undergoing structural change in the transition from a command to a market economy. The civil service and state-owned enterprises have accounted for a high proportion of total formal employment in China, the Lao People's Democratic Republic and Viet Nam, but in all those countries economic policy is trying to trim the civil service, reduce the role of state-owned enterprises, and more effectively manage the large number of such enterprises that are losing money. In 1993, Viet Nam extended compulsory social security retirement coverage to the private sector, but compliance is low.

In China, from the early 1950s when social security began in China to the Cultural Revolution in 1966, the All-China Federation of Trade Unions operated a national social security plan covering state-sector workers in urban areas. Workers in collective sectors in urban areas were also covered but with less generous benefits. During that period, nearly all urban workers worked for the government, for state owned enterprises or in collectives, and thus nearly all were covered by social security. From the beginning of Chinese social security policy, however, the government limited its concern to the urban sector, which has never been more than 35 percent of the workforce. Following the economic collapse caused by the Cultural Revolution, state-owned enterprises individually were made responsible for providing retirement benefits for their workers. Gradually since then, pooling networks across enterprises have been reestablished. In a pooling network, a group of enterprises join together, pooling their resources to pay for the retirement benefits of the workers in the group. By pooling, the enterprises are able to spread their risks so that if one enterprise encounters financial difficulties the others assist in paying for the retirement benefits of the workers in that enterprise.

The economic changes in China during the 1990s have reduced the effective coverage provided by social security. The number of non-state sector employees in urban areas has

increased significantly as economic reform and migration from rural to urban areas have greatly changed the urban workforce. State sector workers were more than 90 percent of the urban workforce in the central planning era but in 2000 were only about 50 percent (Liu and MacKellar 2001). The social security programs do not cover non-state sector workers. Most rural elderly are still supported by their families.

Hong Kong, though now a part of China, has a separate social security system from the rest of China. In 2000, it began a mandatory individual account system where workers and employers both contribute 5 percent of wages into funded individual accounts. This is the only mandatory individual account system in Asia. It does not provide a rate of return guarantee as do many of the mandatory individual account systems in Latin America, but maintains a fund to compensate participants for losses due to illegal activities by fund managers.

#### The Middle East

The Arab countries of the Middle East include some of the world's wealthiest and poorest countries. Birth rates are high in most of the Arab countries--Yemen with 7.6 children per woman, Saudi Arabia with 5.5, and Iraq with 4.8, but 2.7 in Israel (United Nations 2001). As a result, population aging is not viewed as a problem. With the exception of Yemen, which is poor, all of the countries have fairly high life expectancies, with the life expectancy at birth for females in most countries being 70 or higher, but only 50 in Yemen. In most countries, the social security programs are relatively young—all have been established since 1950.

Given the cultural similarities of the Arab countries of this region, it is not surprising that their social security programs have many similarities. All the programs are traditional defined

benefit social security programs. Some of the wealthy countries, such as Kuwait and Saudi Arabia, provide very generous benefits to retirees (Gillion, Turner, Bailey and Latulippe 2000).

Israel established a flat benefit program in 1953. Among the Arab states, Iraq was a leader, establishing a provident fund in 1956 and converting that to a social security plan in 1964 (US SSA 1999). By contrast, Oman only started its social security program in 1991. The program in Yemen was also implemented that year, at the time of the reunification of the country. South Yemen had started a program in 1974, but it varied among the different sultanates (Gillion, Turner, Bailey and Latulippe 2000). The social security programs of the region are relatively young and generally have adequate funding to pay current benefits.

While the coverage rates tend to be higher than in Africa and Asia, the Arab countries in the region generally do not cover all workers. In this regard, it is important to distinguish between nationals and non-nationals. The labor market in this region is characterized by a large number of migrant workers. Bahrain, Oman, Saudi Arabia, and the United Arab Emirates exclude foreign workers from coverage under their social security programs. By contrast, Jordan covers migrant workers on an equal basis with its own citizens (Gillion, Turner, Bailey and Latulippe 2000).

Some of the countries allow workers to receive retirement benefits at ages that are young by international standards. In Jordan, both men and women can retire at age 46. In Yemen, workers can retire at age 45 with 20 years of contributions, and in Kuwait, women can retire at age 40 with 20 years of contributions. In Lebanon, both men and women can receive benefits at any age with 20 years of contributions. In Bahrain, workers can receive retirement benefits at any age while continuing to work, so long as they have 20 years of contributions. Some female workers retire as young as 35. Saudi Arabia, Bahrain and Iraq, however, have all set retirement

age for men at age 60. In Saudi Arabia, workers failing to meet qualifying conditions for retirement benefits may receive a refund of their contributions (US SSA 1999).

While most of the countries pay benefits as annuities, Lebanon and Yemen pay benefits as lump sum payments. Most of the countries base benefits on the average of the final two years' earnings, but in Kuwait they are based on the final month and in Lebanon they are based on the final month or the average of the final 12 months, whichever is higher. Kuwait provides benefits equal to 65 percent of the final month's earnings plus 2 percent of the final month's earnings times years of service above 15 years. Thus, someone working 30 years would receive the maximum replacement rate of 95 percent of the last month's earnings, perhaps the most generous system in the world. This benefit could be received at age 50 for someone working continuously from age 20. Up to 25 percent of the retirement benefit can be received as a lump sum (US SSA 1999).

In all the countries of the region except Lebanon, both employers and employees contribute to the financing of social security, with the employer generally contributing a higher amount. In Lebanon, only the employer contributes. In Iraq, oil companies contribute 20 percent, while all other companies contribute 12 percent. These contributions finance employment injury and other benefits as well as retirement benefits. In Oman, the government provides a subsidy to the social security fund equal to 5 percent of total wages. The combination of fairly long life expectancy plus low retirement age makes the social security system in Kuwait expensive. To finance it, the Kuwaiti government provides a subsidy of 10 percent of total wages. In Yemen, by contrast, the government contributes 6 percent for its employees, while all other employers contribute 9 percent.

Because social security in Jordan is fairly young, with few beneficiaries relative to contributing workers, it is building up assets. It first started paying benefits in 1995, and in 1996 it had assets equal to 17 percent of GDP (Gillion, Turner, Bailey and Latulippe 2000).

Israel provides a defined benefit social security program that provides flat rate benefits, only varying by marital status and number of children. The government pays the entire cost of pensions to new immigrants. Workers earning below half the average wage pay lower social security contributions than do higher wage workers. It also has quasi-mandatory employer-provided pensions that are offered as the result of collective bargaining and that covers most workers.

#### Latin America and the Caribbean

South American countries were pioneers in the world development of social security. Chile in 1924 became the first country in the Americas (including North America) to adopt a social security old-age benefit program, with Uruguay following in 1928, and Brazil in 1934 (a year earlier than the United States). All of the countries in South America have had social security programs for at least 50 years. By comparison, in 1950 only three African and two Asian countries had enacted social security old-age benefit programs (Mesa-Lago 1991). Almost 50 years, however, separate the creation of the first program in South America and the last program in the Caribbean. Trinidad and Tobago established its social security program in 1971, and Antigua and Barbuda established its program in 1972 (US SSA 1999).

At the end of the twentieth century South American countries were again social security pioneers, this time in the development of individual account plans. Until the reform in Chile in 1981, no country had private administration of a social security pension program. Because of the

poor functioning of their social security programs, and after observing the Chilean social security reform for more than a decade, seven other Latin American countries have introduced funded individual accounts as part of their social security system. In some countries, high inflation, a low level of education of the workforce, rapid population growth, overprotected economies and corruption contributed to problems in the structure and governance of the pay-as-you-go social security systems in these countries. The first countries to switch to individual accounts (with the year implemented) were Peru (1993), Colombia (1994), Argentina (1994), Uruguay (1996), and Mexico (1995-1996). These were followed by two of the poorest countries in the region, Bolivia (1997) and El Salvador (1998) (US SSA 1999). Nicaragua has also approved a reform scheduled to go into effect in 2001, and Costa Rica and Venezuela are considering such a system. Costa Rica currently has a system of voluntary individual account pension plans that are administered by both private and public pension fund managers (World Bank 2000).

The mandatory individual accounts plans are managed by private sector pension fund managers, sometimes with the government also operating a pension fund management company that competes with the private companies to attract workers as clients. The benefits received by the worker depend on the investment returns received on the worker's account as well as various fees charged to the account. The structure of fees varies across countries, with countries often regulating what types of fees are permitted. When a flat monthly fee is charged for managing individual accounts, that fee structure is disadvantageous to lower income workers with small accounts. Fees are charged both for the managing of individual accounts and for converting individual accounts to annuities. For example, in Chile workers choosing an annuity purchase that from an insurance company for an administrative fee averaging 5.46 percent of the value of the annuity (Kay and Kritzer 2001)

The countries adopting individual account plans have copied some features of the Chilean reform, but have taken three different approaches (Mesa-Lago 1997).

1. Directly following Chile, the countries of Bolivia, El Salvador and Mexico have closed their social security system to new entrants and substituted a defined contribution individual account system. All other reformed countries in Latin America have retained their traditional defined benefit social security system in some form.
2. Argentina and Uruguay have introduced mixed systems. In Argentina, all workers participate in a mandatory defined benefit social security program that provides a base benefit and must choose between an additional individual account program or a second defined benefit program. The social security program that provides a base benefit provides a flat rate benefit that increases with years of contributions but not earnings. In Uruguay, low-income workers only participate in the traditional defined benefit social security program, while higher income workers participate in both that program and an individual account. In Uruguay the social security program provides an earnings-related benefit. Costa Rica has not yet implemented a new program that will introduce a small mandatory account on top of its existing social security system (Kay and Kritzer 2001).
3. Colombia and Peru have two competing programs, with workers choosing to participate in one.

In all of the countries, adjustments have been made to the initial reforms. In response to the criticism that the system placed too much financial market risk on workers nearing retirement, Chile has mandated that each pension fund provider offer a bond fund available to men age 55 and older and women age 50 and older.

These systems have been credited with encouraging the development of national stock markets and increasing national savings (Piñera 2001). While some policy analysts thought that converting to a defined contribution program would reduce contribution evasion because benefits would be tied more closely to contributions, contribution evasion remains a problem in these countries, especially among lower paid workers, temporary workers and workers in the informal sector (Bailey and Turner 2001).

To reduce benefit risks to workers, a number of the privatized systems have incorporated guarantees as features of their systems (Turner and Rajnes 2001). These guarantees can involve a minimum benefit level, a minimum rate of return, or a minimum rate of return relative to an index, such as the average of rates of return received by all pension funds. In Chile and Argentina, relative rate of return guarantees are provided, so that no pension fund can credit its account holders a rate of return less than a certain amount below the average for all pension funds. In Chile, Colombia, Mexico, Peru and other countries workers have a guaranteed minimum benefit provided by the government (Aichmann 2001).

Brazil has an unfunded social security program. This program provides benefits of 100 percent of average salary based on the final three years of work for those who have contributed 35 years (men) or 30 years (women). Because of its generosity, the system operates with a large annual deficit that requires substantial subsidization from government general revenues. Brazil has a special social security program to cover rural workers.

While in Latin America the trend is towards defined contribution systems, in the Caribbean, as in parts of Africa, the trend has been away from provident funds established during the British colonial period and towards pay-as-you-go social security programs. The Bahamas, Saint Kitts and Nevis, and Saint Vincent and the Grenadines are among countries that converted

a provident fund to a traditional defined benefit social security program (Gillion, Turner, Bailey and Latulippe 2000).

Because of the large informal sector in Latin America and the Caribbean, many workers are not covered by social security, either because their type of employment is not covered or because they are covered under law but they or their employers evade making contributions. Argentina and Uruguay are the only countries with individual account defined contribution plans that have mandated coverage of self-employed workers. Jamaica has compulsory coverage for the self-employed and rural workers but contribution evasion is widespread. Costa Rica has succeeded in expanding coverage among the self-employed, partly by setting contribution rates that are lower than the combined rate for employers and employees (Gillion, Turner, Bailey and Latulippe 2000).

The military are not covered by the general social security program but are covered by special programs in all countries of the region, except in Costa Rica, which does not have armed forces, and Bolivia, which included its armed forces in social security in 1996. Thus, with the exception of Bolivia, the military are excluded from the new defined contribution systems in Latin America (US SSA 1999).

#### Central and Eastern Europe and Central Asia

The countries of Central and Eastern Europe and Central Asia are in the process of converting their economies from a communist approach towards more of a free market approach to organizing economic activity. Countries in the region differ considerably in their levels of economic development. The Czech Republic, Hungary and Slovenia are upper middle income countries, while Albania, Macedonia and Moldova have relatively low incomes.

The social security programs in many of these countries still have features inherited from the systems of the former planned economies, which provided nearly universal coverage during the Communist era and consisted of social security pensions, short-term cash benefits and health care. These countries provided added economic security through guaranteed employment, the provision of low-cost housing and heavily subsidized basic goods and services. Also, state enterprises provided cash and in-kind benefits for retirees and their families, including subsidized recreational facilities and vacations and subsidized loans (Gillion, Turner, Bailey and Latulippe 2000). This region has the highest social security payroll taxes of all the regions, averaging more than 20 percent. These high tax rates are the result of generous benefits and a high ratio of retirees to covered workers (Palacios and Pallarès-Miralles 2000).

Social security pensions for the elderly that were part of the social protection systems in the former centrally planned economies of this region were designed to work in a different economic and social environment than emerged in the 1990s (Gillion, Turner, Bailey and Latulippe 2000). First, in the Communist era with high public sector employment and collectivized agriculture, coverage was high, but with the development of private sector enterprises coverage has declined. The shift to a market economy has reduced the number of covered workers, while raising the number of retirees.

Second, in the Communist era few countries had high inflation, and thus no automatic provisions for indexing benefits. After 1990, nearly all of the countries had high and persistent inflation. To prevent benefits from deteriorating in purchasing power, adjustments were made, many of them being a fixed amount increase that was the same for all pensioners. Such adjustments have reduced the difference between minimum and maximum pensions from a factor of three to a factor of two in Bulgaria. In Latvia and Lithuania, earnings-related pensions

degenerated into flat-rate pension schemes with most workers receiving the basically the same amount, due to the effect of flat amount benefit adjustments to high inflation rates (Gillion, Turner, Bailey and Latulippe 2000).

Third, the social security programs were designed for an economy with moderate differences in earnings. Earnings differences have increased dramatically in all countries in the region. Widening differences in earnings, coupled with reduced differences in maximum and minimum benefits cause dissatisfaction among higher earning workers.

Social pensions for elderly who do not otherwise qualify for a pension are paid in most countries five years after the normal retirement age. Social and minimum pensions were linked to the minimum wage under the old system. This link has been severed in Bulgaria, Russia and the Ukraine. In some countries, minimum wages have been held at a low level, leading to the inequitable situation that minimum pensions are higher than minimum wages in Russia.

In many of the countries, workers use disability pensions as a way of taking early retirement. In Poland, disability pensioners are nearly 40 percent of all pensioners, while in Croatia, Hungary, Macedonia and Slovakia they exceed 20 percent of the total (Gillion, Turner, Bailey and Latulippe 2000).

In many of the countries, the social security system provides moderate or low replacement rates in spite of pension systems that formerly were generous. The low replacement rates result from the absence of automatic pension adjustments for inflation and the limitations on maximum pension amounts. In Russia and other countries of the former Soviet Union, replacement rates are 40 percent or less. In Tajikistan, the social security system has failed to pay benefits for periods of months due to financial turmoil in the country, caused partly by

internal armed conflicts and partly by the difficult financial adjustment following the dissolution of the Soviet Union.

The benefits provided by existing and newly created social protection systems are not sufficient to handle the economic problems facing retirees in the region. Many of these countries are rethinking their social security programs, with some adopting individual account defined contribution programs. Comprehensive reforms of social security have been implemented in Croatia, the Czech Republic, Hungary, Latvia, and Poland. These programs are just being started. All other countries in the region have debated reforms for several years.

Several countries have increased their retirement age as a move towards insuring the solvency of their social security systems. Those countries include Bulgaria, Croatia, the Czech Republic, Estonia, Latvia, Hungary, and Poland (Gillion, Turner, Bailey and Latulippe 2000).

Latvia is one of the first countries in the world to implement a notional account system. Both Poland and Latvia have established mandatory pay-as-you-go defined contribution plans, called notional plans, as the first tier of their retirement income systems and mandatory funded defined contribution plans as the second tier. In Latvia, the worker's individual account balance in the notional account plan is credited with a rate of return equal to the growth rate of the national taxable wage base.

Hungary in 1998 established an individual account system receiving contributions of 8 percent, maintaining a defined benefit system as the primary system with contributions of 22 percent. Poland, one of the most economically successful of the former communist countries, introduced a pension reform in 1999 where all new workers participate in a notional account system and a funded individual account.

Kazakhstan, an oil-rich former Soviet republic, reformed its social security system in 1997 by requiring workers to place 10 percent of their wages into privately-managed individual retirement accounts, phasing out its defined benefit social security system. Croatia will introduce a funded individual account system in 2001 (Fox and Palmer 2001). Poland Latvia, Croatia, Hungary and Kazakhstan all have funded accounts. Macedonia, Romania and Russia are also planning to introduce funded individual accounts and they also are being considered by the Czech Republic, Slovenia, Lithuania and Bulgaria.

#### The OECD Countries

The OECD countries have the oldest age structures, which is a major factor motivating their social security reform. The population will grow dramatically older in many of the countries over the next couple of decades due to low fertility rates, lengthening life expectancy, and the baby boom following World War II. The old age dependency ratio, which can be defined as the ratio of the population age 65 and older to the population age 20 to 64, effectively acts as a “price” for social security benefits (Turner 1984). For example, if there is one older retired person for every two workers (a ratio equal to 0.5), it costs each worker \$0.5 to raise the average benefit level of retired persons by \$1 when a system is financed on a pay-as-you-go basis. The higher is the old age dependency ratio, the higher is the “price” of raising social security benefits.

The first social security retirement benefit program originated in Germany at the end of the nineteenth century. Germany’s program began in 1891, and by the first decade of the twentieth century Australia, Belgium, France, Ireland and New Zealand had programs (US SSA 1999).

Most of the social security programs in the region are defined benefit (Gillion, Turner, Bailey and Latulippe 2000). Some countries, however, have incorporated a defined contribution element into their mandatory benefits. The mandatory employer-provided plans in Australia are primarily defined contribution plans. In the United Kingdom, workers are permitted to contract out of (not contribute to) the earnings-related part of social security and replace that with an individual account defined contribution plan. Italy and Sweden have started notional account plans. Sweden replaced its defined benefit social security program with a notional account, supplemented by mandatory funded individual account plans, with workers choosing private funds to manage the individual accounts starting in 2000. An innovation in this reform that directly deals with the effect of increasing life expectancy raising benefit costs is that life expectancy increases reduce the monthly benefits provided from the notional account plan (Gillion, Turner, Bailey and Latulippe 2000).

Ireland's social security program provides a flat-rate benefit that is not related to earnings. This is also done in Iceland, the Netherlands, and Norway. In all these countries, the benefit is paid to people with work experience. Canada, Denmark, Japan, and the Netherlands provide a universal pension that is not based on having worked. Australia only provides means-tested social security benefits. It does not provide an earnings-related social security benefit, but instead has mandated employer-provided pensions.

Replacement rates provided by social security programs vary greatly in the OECD region. The English speaking countries of Australia, Canada, Ireland, New Zealand, the United Kingdom and the United States all have social security systems that provide low or moderate benefits. The average income replacement rate in Canada and the United States is about 40

percent. Italy, Portugal and Spain provide replacement rates exceeding 75 percent, while Austria and Iceland have rates in the vicinity of 90 percent (Gillion, Turner, Bailey and Latulippe 2000).

Most OECD countries finance retirement benefits on a pay-as-you-go basis. Canada, Denmark, Japan, and the United States, however, currently have partial funding of social security. In the United States the retirement of the baby boom generation is projected to completely deplete the fund, while in the Canada Pension Plan, partial funding is projected to remain indefinitely. In Austria, Belgium, France, Germany and Spain the pay-as-you-go part of the retirement income system is relatively large, with these countries also having relatively little in benefits provided through occupational pension plans, and the plans that they do have tending to be unfunded. For example, the retirement income system in France is almost entirely financed on a pay-as-you-go basis, which can be attributed to the destruction of an earlier funded system due to high inflation. By contrast, in Denmark, the Netherlands, Switzerland, and the United Kingdom, the funded part of the retirement income system is relatively large (James 2001). In Japan, the national social security funds can be invested in the private sector. Between fiscal years 1993 and 1996, because of declines in Japanese capital markets, the social security trust fund lost 1.4 trillion yen- 6 percent of its value (Gillion, Turner, Bailey and Latulippe 2000).

OECD countries have made a number of changes in their social security programs to ensure financial viability of the systems in the face of population aging (Gillion, Turner, Bailey and Latulippe 2000).

1. Many of them have legislated increases in the age for early or normal retirement in social security to reduce benefits and encourage workers to retire at a later age. One way to cut benefits is to postpone access to full benefits to a later age, coupled with actuarial reductions in benefits received at an earlier age. This

approach has been used by Germany, Italy, Japan, Switzerland and the United States.

2. Several countries have raised the age of early retirement for women to bring it nearer to or equal to that of men. These countries include Greece, Portugal, Switzerland and the United Kingdom.
3. Third, some countries have raised the earliest age at which both sexes can receive benefits. These countries include Italy and Germany.
4. A number of countries have reduced benefits by increasing the years used in the earnings averaging period. Spain has done so, resulting in more years of relatively low earnings being included, lowering average earnings in the benefit calculation. Finland has also increased the number of years of earnings for calculating its mandatory pension. Austria, France, Italy and the United Kingdom have also increased the number of years used in benefit calculation. In Italy, the increase was from the worker's last five years of earnings to lifetime earnings.
5. The United Kingdom has reduced future benefits by indexing by prices rather than the higher of prices or wages the basic flat benefit. Prices grow more slowly than wages over long periods. The United Kingdom has cut future benefits to low levels but may face a relatively large reliance on public assistance pensions in the future.
6. Japan has cut future benefits by reducing the benefit accrual rate in the benefit formula.

7. Benefits have been reduced in some countries with cuts made through taxes targeted towards middle and upper income workers. Net (after-tax) benefit reductions for upper income households have been introduced in Australia, Canada, Finland, Iceland, the Netherlands, New Zealand, and the United States. Canada introduced a “clawback” of benefits paid to upper income recipients in 1989, through the income taxation of benefits for high-income earners.
8. Germany has switched from basing benefits on gross wages to basing them on net wages. Future increases in social security contribution rates will cause net wages to grow more slowly than gross wages.
9. The Netherlands replaced the survivors’ insurance benefits with a new program that provides lower benefits and stricter eligibility requirements. The government’s rationale for these changes is that private life insurance is widely available.
10. Benefits can be reduced by changing the calculation of cost-of-living adjustments. Germany and Japan have both moved from basing post-retirement benefit adjustments on the growth of net wages rather than gross wages. With the growth of taxes and social security contribution rates, net wages grow less rapidly.

As well as reducing benefits, contribution rates have been increased in many countries, including Denmark, Finland, France, and Sweden. In nearly all OECD countries, contribution rates are scheduled to increase in the future. France, in addition to raising the contribution rate, increased the contribution base to include employer contributions to occupational pension plans.

Countries that have in the post World War II era completely eliminated the ceiling on taxable earnings include Finland, Norway, Portugal and Sweden. In Japan, where twice-yearly bonuses are an important part of compensation for many workers at large firms, starting in 1995 those bonuses are subject to a social security tax of one percent (Gillion, Turner, Bailey and Latulippe 2000).

Using a broad definition of privatization that includes mandatory occupational pensions, nearly a third of the OECD countries discussed in this section have partially privatized their social security (Gillion, Turner, Bailey and Latulippe 2000). They have done this by making employer-provided pensions mandatory (seven countries), by allowing for contracting out from the social security system (two countries), or by mandating individual accounts (one country). The essential aspects of privatized systems are that they are managed in the private sector, and that they are either mandatory or they replace part of mandatory social security. Countries with private pensions mandated by law include Australia, France and Switzerland. In Denmark, Finland, Netherlands and Sweden, private pension coverage is mandatory for most workers due to labor agreements. Contracting out is a form of voluntary privatization, whereby workers have a reduction of their social security contribution in exchange for participating in a funded employer-provided plan. It is permitted in Japan and the United Kingdom, where contracting out to individual account plans is also permitted.

Individual accounts are mandatory in Sweden, with a contribution of 2.5 percent of salary. Initially, the funds were invested in a general pool run by the government. Starting in 2000, Swedish workers were allowed to choose from 460 different pension funds to manage their pension investments, with the default fund being a government-run fund. The Swedish system incorporates features that reflect lessons learned from the Chilean experience, in particular

concerning design features to reduce the administrative costs of the system. Unlike in Chile, in Sweden the government has a major role in keeping the records on the individual accounts. Workers' contributions are collected from employers and sent to the National Tax Authority, which acts as a central collection agent. Each year the money contributed by all the workers during the year is placed on an interim basis in a fund established at the National Debt Office in the Swedish Treasury. After workers have filed income taxes for the year, the funds are transferred to the accounts chosen by the workers (Sundén and Turner 2001).

## Conclusions

This survey has indicated a great diversity in social security arrangements, reflecting diversity in levels of development, historical experience, and philosophy concerning the role of the public and private sectors in providing retirement income. The survey has described the major trends in development and reform of social security around the world but has not attempted a critique of the reforms (for critiques see Gillion, Turner, Bailey and Latulippe, 2000; Turner 2000; and Stiglitz and Holtzmann 2001). While there are some distinctive characteristics of the social security systems in particular regions of the world, within each region there are also considerable differences. In nearly all regions, social security systems are being reformed to adjust to changing economic circumstances and to the aging of populations.

Some general conclusions can be drawn about social security reforms. First, the dominant form of social security around the world continues to be the traditional defined benefit social security program. Second, there is a trend in some regions of the world towards incorporating a defined contribution program as part of social security. This has occurred most strongly in Latin America and in Central and Eastern Europe, but has also occurred in the OECD

region. Third, in Africa, the Middle East, and most of Asia, there has not been a trend towards defined contribution plans, and in some cases there has been the reverse trend, from provident funds towards defined contribution social security programs. Fourth, over time there has been a trend towards more countries having some form of social security program. There still are a few countries, however, without a national social security program. Fifth, in much of the world, the most pressing social security issue is not the debate between defined benefit and defined contribution programs but the need to cover a substantial portion of the workforce. The majority of the workers around the world still do not participate in a social security old-age benefits program. Sixth, in countries with social security programs, a number of countries have made changes within the structure of those programs to deal with population aging. A number of countries have increased the age of early or normal retirement or have encouraged the postponement of retirement. A number of countries have changed the way that benefits are calculated so as to reduce the generosity of benefits.

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Table 1. Types of Mandatory Old-Age Benefit Programs

Type of Program	Type of Plan	Funding Arrangement	System Management	Countries
1. Traditional Defined Benefit Social Security	DB	PAYG or partial funding	Public	Canada, Germany, United States, most OECD
2. Individual Account	DC	Funded	Private	Chile, Hungary, Poland, much of Latin America
3. Provident Fund	DC	Funded	Public	India, Kenya, Singapore, Indonesia
4. Notional Account	DC	Unfunded	Public	Latvia, Poland, Italy, Sweden
5. Contracting Out	DB or DC	Funded	Private	Japan,

				United Kingdom, Peru
6. Mandatory Employer-provided	DB, DC or cash balance	Funded	Private	Australia, Switzerland
7. Quasi-mandatory (required by labor contract)	DB or DC	Funded, Unfunded (France)	Private	Netherlands, Sweden
8. Flat benefits	DB	Unfunded	Public	Ireland, Israel, Canada, South Africa

Note: DB=defined benefit, DC=defined contribution, PAYG=pay-as-you-go

