ESPE 96: The Colombian Pension System: Description, Demographic Trends, and Macroeconomic Analysis

The Colombian pension system is composed mainly of two alternative schemes: a public pay-as-you-go (PAYG) system administered by Colpensiones, and an individual savings system, which includes several private managers. There are also special regimes, some fully in force and others gradually disappearing. This article contributes to analyze the current situation and possible future outlook of this system through three types of analysis: (i) the description and characterization of its current status; (ii) the study of the country's demographic trends; and (iii) the macroeconomic analysis of the evolution and impact of the two main regimes.

The article is structured in three sections. The first one describes the system, presenting figures related to coverage, fidelity rates, transfers, impact on public finances, and parallel programs (‘Colombia Mayor’ and ‘Beneficios Económicos Periódicos’, BEPS), among other characteristics. This section shows, for instance, that although pension coverage has grown slightly in recent years, it remains low. With figures to 2019, less than a fourth of the country's elderly population is able to obtain a pension. On the other hand, although the number of persons affiliated to the system has grown considerably, the proportion of affiliates who contribute regularly, known as the “fidelity rate,” is very low (below 40%). Simultaneously, of the total number of regular contributors, only 60% meet the requirements to be pensioned. Despite the low coverage of the system, the annual transfers made by the National Central Government to finance the allowances paid by Colpensiones and the special regimes have accounted for close to 3.5% of GDP.

The second section focuses on the study of demographic trends relevant to the analysis of the evolution of the Colombian pension system. Based on a review of multiple sources of vital and migratory statistics since the beginning of the 20th century, historical estimates are made and projections of total population, age distribution, work life expectancy, retirement probability, and duration of retirement life are constructed.

The results of the second section project aging of the Colombian population. As an example, today half the population is under the age of 30, and only 12% are over 60. By 2060, 36% are projected to be under 30 years of age, while almost 30% will be over 60. Another result in the same direction shows that a person who reaches the age of 60 today expects to live, on average, until the age of 83. By 2050, a 60-year-old will expect to live, on average, up to age 86. There are currently about 4.5 working-age persons for every person aged to retire; by 2050, this figure will have reduced to 2, should the same retirement ages be maintained.

The third section examines how the two main regimes and some possible (parametric) reforms could affect aggregate variables such as consumption, investment, taxes, wages, and interest rates using a macroeconomic model. Naturally, it is important to note that, as any other economic model, this model is based on assumptions and does not intend to cover all the elements of the pension reality. For example, the model does not analyze the case of those who do not meet the pension requirements or who use the State's guarantee to achieve a minimum pension. Instead, the effects of the two main schemes are analyzed regarding persons who achieve a pension higher than the minimum wage.

Among the results obtained from the model, we found that a pension equivalent to twice the one achieved in the savings regime is obtained in the PAYG system. One reason for this is that in the model—as is the case in Colombia—the pension of the public regime is subsidized: for every $100 pesos of mandatory contribution to the pension system, the Government must charge every individual in the model, regardless of the regime to which s/he is affiliated, another $92 pesos in taxes to subsidize the PAYG regime. If, instead, the amount of pensions under that regime were reduced so as to be financed only by the mandatory contributions of its affiliates (i.e. without recourse to government subsidies), the decrease would have to be 51.4%. In other words, the average subsidy granted to the sharing scheme’s pensions in the model amount to slightly over half of its amount. In addition, with the aging population, the payment of taxes to finance the PAYG regime would more than double by 2050, should the same retirement conditions remain.

Another result is that if a reform that combines three measures (increase the retirement age; include the whole working life to calculate the pension in the PAYG regime; and decrease the replacement rate of that regime to 50.8%.) is carried out , the pension system would be self-funded and all individuals in the model would benefit because there would be a tax reduction, an increase in aggregate savings and therefore in the level of capital, which would in turn increase labor productivity and wages.

Although the previous results suggest that it may be appropriate to reduce the fiscal burden of the PAYG regime in the model, eliminating this regime would not be desirable because it would imply a significant increase in the aggregate savings supply and, therefore, a fall in the interest rate that would significantly affect the benefits offered by the savings regime.

The main message of the model is to remind us that the structure of the pension system affects not only pensions, but also macroeconomic variables such as savings, labor productivity, wages, and, ultimately, the country's social welfare.

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