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The article is developed in three sections. **The first provides a description of the system** presenting figures related to, among other characteristics, coverage, loyalty rates, transfers, impact on public finances, and parallel programs ('Colombia Mayor' and 'Periodic Economic Benefits' -BEPS). This section shows, for example, that although pension coverage has grown slightly in recent years, it remains low: with data from 2019, less than a quarter of the country's older adults manage to obtain a pension. On the other hand, although the number of affiliates to the system has grown considerably, the proportion of affiliates who contribute with some regularity, known as the "loyalty rate," is very low, less than 40%. In turn, of the total number of regular contributors, only 60% manage to meet the requirements to receive a pension. Despite the low coverage of the system, the annual transfers made by the national government to finance the pensions paid by Colpensiones and special regimes have represented around 3.5% of GDP.

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

The results of the second section project an aging of the Colombian population. An example of this is that today half of the population is under 30 years old and only 12% is over 60 years old. By 2060, it is projected that 36% will be under 30 years old while almost 30% will be over 60. Another result, in the same direction, shows that a person who today reaches the age of 60 expects to live on average until the age of 83. By 2050, a 60-year-old person will expect to live on average until the age of 86. Currently, there are around 4.5 working-age people for each person of retirement age; by 2050, that figure will have been reduced to 2, if the same retirement ages are maintained.

[illegible]

[illegible] **aggregate variables** such as consumption, investment, taxes, wages, and interest rates. Of course, it is important to note that this, like any economic model, is based on assumptions and does not intend to cover all 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 resort to the State guarantee to reach a minimum pension. Instead, it analyzes the effects of the two main regimes in relation to people who achieve a pension greater than the minimum wage.

Among the results of the model, we find that in the pay-as-you-go regime, the pension allowance obtained is equal to twice that obtained in the savings regime. One reason for this is that in the model, as in Colombia, the public regime pension is subsidized: for every $100 pesos of mandatory contribution to the pension system, the government must charge everyone in the model, regardless of the regime to which they are affiliated, another $92 pesos in taxes to subsidize the pay-as-you-go regime. If instead the pension allowance in that regime were reduced so that they were financed solely by the mandatory contributions of its affiliates, that is, without resorting to government subsidies, the decrease would have to be 51.4%. In other words, the average subsidy granted to pensions in the pay-as-you-go regime in the model is equivalent to slightly more than half of the allowance. Additionally, with the aging of the population, the payment of taxes to finance the pay-as-you-go regime would rise to more than double by 2050, if the same retirement conditions are maintained.

Another result is that if a reform is made that combines three measures: increasing the retirement age, including the entire working life for calculating the pension in the pay-as-you-go regime, and reducing the replacement rate of that regime to 50.8%, the pension system becomes self-financing and all individuals in the model benefit because there is a decrease in taxes, an increase in aggregate savings, and hence in the level of capital, which in turn increases labor productivity and wages.

Although the above results indicate that in the model it may be convenient to reduce the fiscal burden of the pay-as-you-go regime, it would not be advisable to eliminate this regime because it would imply a significant increase in the supply of aggregate savings and, therefore, a fall in the interest rate that would considerably 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 social welfare of the country.