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Summary of
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"Aging Population and Canadian
Public Pension Plans" by Tamim Bayoumi

Demographic shifts caused by aging populations create a number of problems for policymakers. Among these, one of the more important is the funding of public pension plans. Canadian public pension plans (like those in most other industrial countries) are run on a "pay-as-you-go" basis, in which current contributions are used to pay for current entitlements. This paper explores the economic issues involved in the interaction between an aging population and the public pension system.

The two pay-as-you-go programs in the Canadian public pension system are the Quebec Pension Plan (QPP), which covers residents of Quebec, and the Canada Pension Plan (CPP), which covers all other Canadians. Both schemes are funded by payroll taxes and provide pensions that are related to income. A third program, Old Age Security, provides benefits that are equal across individuals and is funded out of general taxation. The analysis in this paper focuses on the CPP and QPP, whose contribution rates are projected to rise from their current level of 5 percent of eligible earnings to over 13 percent from 2030, reflecting the impact of the baby-boom generation.

A pay-as-you-go pension scheme can provide partial insurance against long-term adverse productivity disturbances by subsidizing generations that experience exceptionally low productivity and taxing those with exceptionally high productivity. It will also produce intergenerational transfers in response to a demographic disturbance. However, in this case, the effects are not so benign. The direction of the intergenerational transfers depends critically upon whether it is benefits or premiums that vary over time to keep the system funded. If benefit levels are maintained over time and premiums are allowed to vary, then the baby-boom generation will gain, since it will face relatively low premiums when working while still receiving the same benefits as earlier generations, whereas the generations immediately after the baby boomers will lose, since they will have to pay high premiums to finance the retirement of the baby-boom generation. This produces fiscal transfers across generations with little economic rationale.

An alternative is to set contribution rates at their underlying long-term levels, which would allow the system to accommodate the effects of demographic change without creating large intergenerational transfers. At current benefit levels, such a policy would imply a significant rise in current contribution rates, from 5 percent of eligible earnings to 10-10 1/2 percent. This would allow the system to build up sufficient reserves over time (on the order of 15-20 percent of output) and enable it to cope with the retirement of the baby boomers without recourse to borrowing or significant increases in contribution rates. To the extent that it is desirable to keep contribution rates stable over time, this analysis implies that there is a substantial level of underfunding in Canadian pension plans.

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