Forced Savings: The hidden costs of expanding public pensions

Macro-econometric analysis of the CPP/QPP expansion

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For better or worse, the Canada and Quebec Pension plans will start undergoing changes in 2019 aimed at expanding the levels of benefits over the next 40 years, balanced out by premium increases over the next seven. Although the long-run net economic impacts had been always expected to be neutral, there is good reason to question the federal government's assessment that the enhancements would only have minor negative impacts on short-term employment and GDP.

New macro-econometric analysis[1] shows that the initial effects are likely to be four-and-a-half times greater than what the Department of Finance indicated publicly. Rather than temporarily constraining employment by only 0.07 per cent[2] from status quo projections in the mid-2020s, the hit is more likely to be negative 0.32 per cent—equivalent to 64,000 jobs.

In addition, our analysis shows the government could have tempered the downside impacts by about a quarter had they chosen to charge the premium increases to employees only—who are, after all, the ultimate beneficiaries of the pension benefits—rather than split the costs with employees and employers.

Background: What the literature says to expect

To get at the reasons why the structuring of premiums is important, it's helpful to start with others' observations on how the economy responds to changes in payroll levies and taxes. There is a healthy dose of economic literature on their theoretical and empirical effects—levied either on employers or employees. The first and most important point is that it ultimately doesn't matter on which

[1] The macro-econometric impact analysis for this study was conducted by Peter Dungan, Adjunct Associate Professor of Business Economics, Rotman School of Business at the University of Toronto, using the FOCUS model of the Policy and Economic Analysis Program

[2] Finance Canada, Backgrounder: Canada Pension Plan (CPP) Enhancement, http://www.fin.gc.ca/n16/data/16-113_3-eng.asp#ftn6

side the tax is initially levied—the long run effects should be the same[3]. However, it is ultimately the employee side that bears most or all of the costs because the employer portion of the payroll tax transfers over to them in the form of slower wage growth.

Empirical studies into the net effects of employer payroll taxes, both in Canada and abroad, are consistent with the idea that most of the effect gets passed onto wages. Canadian studies[4] have suggested that for every 1 per cent increase in employer payroll taxes, long-run employment is only reduced by between 0.20 and 0.32 per cent.

Studies in other countries collect similar findings.[5] [6]The relationship also applies in the opposite direction. When Chile's social security reforms reduced employer payroll taxes by 18 per cent in the mid 1990s, all the impacts found their way to higher employee wages and none to greater employment.

Although the long-run impacts would be generally similar, the short-term effects of employer versus employee taxation, however, can differ because of lags and rigidities in the way wage and price signals flow through it.

In the case of social security contributions like CPP/QPP, the label 'tax' is arguably only partly right. The technical term for this type of levy is a 'regulatory charge', because it is attached entirely to a specific program. In addition, an employee's contributions generate actuarially proportional entitlements back to them at a later date. For the purposes of measuring the net macroeconomic impacts, however, whether it is called a tax or a charge, an employer does not receive any benefits in return for its CPP/QPP contributions.

This asymmetry in benefits helps explain why an increase in CPP/QPP employee premiums would be less likely to induce a behaviour response than premiums on employers. Employees would tend to see the premiums as what they are meant to be—deferred earnings—and not wish to cut back on their supply of labour because that would affect their future entitlements.

Employers, on the other hand, would see premiums as an additional cost of labour. Their natural response in the short-run, therefore, would be to reduce their demand for labour relative to other forms of productive capacity such as capital or technology, or to concentrate their labour among higher-skill groups where wages are above the maximum pensionable earnings level. The largest negative impacts would likely be felt on employee groups where labour demand tends to be elastic—particularly the young and the less-skilled.[7]

CPP/QPP changes will reduce other forms of savings

Although the CPP and QPP are universal programs with mandatory enrollment, their expansion will not have the same force that one would expect from a brand new payroll levy.

[3] OECD, Payroll Taxation, p 153. http://www.oecd.org/employment/emp/4343154.pdf

[4] DiMatteo & Shannon, Payroll Taxation in Canada: An overview, Canadian Business Economics 1995. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.198.4922&rep=rep1&type=pdf

[5] Kugler & Kugler, Effects of Payroll Taxes on Employment and Wages: Evidence from the Columbian Social Security Reform, Stanford Center for International Development Working Paper No. 134. http://globalpoverty.stanford.edu/sites/default/files/publications/134wp.pdf

[6] Rutkowski, "Taxation of Labor" in Ch. Grey and A.Vourdakis (eds.), Fiscal Policy and Economic Growth in ECA, World Bank, Washington, D.C., 2007. p. 296-7 http://siteresources.worldbank.org/INTECA/Resources/257896-1182288383968/FiscalPolicy%26EconomicGrowthinECA_Ch9.pdf

[7] Borjas, G., Labour Economics 6th ed. https://sites.hks.harvard.edu/fs/gborjas/publications/books/LE/LEChapter4.pdf

One significant factor is that the CPP/QPP is integrated with many existing defined benefit pension plans—particularly in the public sector. In these plans, pension benefit formulas are calculated with CPP/QPP payments already incorporated, and the same is true of premiums. With any additional premiums these employees pay in CPP/QPP, there will be an equal offsetting reduction in the premiums to their general pension plan. Correspondingly, while post-retirement CPP/QPP benefits will increase, they will be completely offset by lower general pension benefits. In other words, employees in these types of plans will see no change in their net pension arrangements and there will be no impacts to filter through the economy.

However, even with other employer-sponsored pension plans without integration, one could expect an induced dose of similar behaviour. With the employer share of premiums rising one per cent of earnings less than $54,000 and four per cent of additional earnings of up to 68,000, some employers may decide to cut back on what they contribute on employees' behalf to their existing plans.

Because the additional premiums on the employee side will cut into their after-tax disposable household incomes, employees too may decide, either consciously or not, to offset the impact by reducing any voluntary retirement savings contributions to RRSPs or TFSAs. Down the road, however, the additional CPP/QPP benefits earned after retirement would be partly offset by a smaller nest egg from other retirement savings accounts.

Study design

To help identify the ways that the pending increases to CPP/QPP could impact the economy and to separate the gross from the net effects, we contracted the University of Toronto's Policy and Economic Analysis Program to run various simulations of their FOCUS macro-econometric model of the Canadian economy.

They conducted three simulation runs, with the aim of identifying the differential effects:

Simulation 1 is simply an application of the full force of the new CPP premiums—with none of the offsets to other types of pension savings discussed above—as they are phased in from 2019 to 2024 and of the additional benefits as they filter out from 2020 to 2060. It should be noted that the model horizon only extends to 2040, so the pension benefits phase-in would only be about half complete. For the sake of simplicity, it is assumed the Quebec Pension Plan is enhanced on a similar scale.

Simulation 2 is the most likely outcome of the CPP/QPP enhancement. It is the same as the above, but it takes into account the real and potential offsets to savings and investment pools discussed above. Here, we assume the combined effect of integrated public and private sector DB plans along with induced small employer and employee retirement saving behaviour represents a 50 per cent offset to additional premiums and benefits. If empirical research suggests that another percentage offset is more reasonable, then it can easily be inferred by linearly adjusting the gaps between Simulation 1 and Simulation 2 results.

Simulation 3 is the same as Simulation 2, except that instead of employers being required to make their share of additional contributions, employees are required to pay the entire amount of premiums. The 50 per cent offset still applies because of the expected reduction in other forms of retirement savings. The benefits stream accruing to employees after retirement, however, is the same as Simulation 2.

Any of the three simulations should tell us if the expectations from literature are fulfilled by the model structure—namely that negative impacts in the short term give way to neutral impacts in the long run. The analysis will also test the rather sparse results published by the Department of Finance Backgrounder and find out if changing the premium payer structure would soften the initial negative economic impacts.

All simulations use the Office of the Chief Actuary's projections for annual contribution and benefits levels. In addition, the model

structure assumes that the Bank of Canada and various governments do not adjust monetary or fiscal policy in response to wage and price shifts.

Findings: current CPP/QPP enhancement

Generally, the results from the first two simulations meet the expectations set out. In the early years, due to the premium hikes, the higher cost of labour induces employers to limit hiring, while the lower household disposable incomes limit spending. There is a fairly muted effect on GDP though because the pool of pension capital begins to grow strongly. In the medium term, that pool is used to fund new capital investment, which in turn raises productivity levels and starts to reverse the economic drag caused by the premium increases. In addition, wages are bid down to rebalance the labour market. In the longer term, higher pension benefits start to build up aiding the spending power of retiree households.

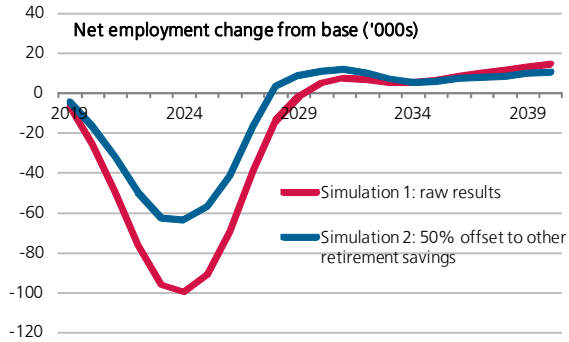
Specifically, results show negative impacts on employment in the early 2020s as the new premiums take effect, followed by a correction to neutral or slightly positive results by 2040.

Simulation 2, the most realistic scenario, estimates that total employment will be 0.05 per cent (10,700 persons) higher in 2040 than had the CPP/QPP not been enhanced (see Figure 1). These findings are quite generous compared to the literature which had suggested employment would fall slightly.

The short-term impacts on employment, however, are considerably more adverse, reaching maximum negative effect in 2024 when employment is projected to be 0.32 per cent (or 63,500 persons) lower than under a non-CPP/QPP enhancement scenario. This impact is more than four-times as harsh as the 0.07 per cent projected by the Department of Finance. In addition, the Focus model suggests that employment will recover to a more or less neutral state by 2028—about 4 years after the premiums are fully phased in. The Finance estimates, however, indicate rebalancing will take place considerably later—in the mid-2030s.

Figure 1

Enhanced CPP/QPP simulations 1 and 2 on employment



The unadjusted results from Simulation 1 are considerably harsher, showing a 99,700-person hit on employment in 2024—about 36,200 worse than Simulation 2 results. Note that Simulation 1 was not meant to be a true projection of reality, but a way to lever the sensitivity of the 50 per cent offset assumption in Simulation 2. If one believes that the policy and behavioural effect on other savings will be less—at say 25 per cent—then disposable incomes will be lower and the impact on employment would be about half-way between the two scenarios—in the neighbourhood of minus 81,000 in 2024.

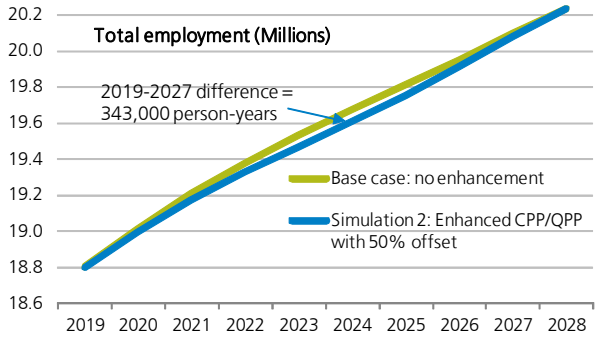
Importantly, the negative short run effects on employment do not mean that actual employment is expected to decline year to year. In fact, they continue to rise throughout the forecast horizon (see Figure 2).

The continuing rise in employment through previous rounds of CPP/QPP adjustments had led many commentators to suggest wrongly that past premium increases had no effect on employment. Although the gap between the lines looks small, the cumulative impact is not inconsequential. It still shows the 2024 result that employment will be 63,500 less than it would have been had the CPP/QPP enhancement not taken place. Taken in its entirety between 2019 and 2027—when the gap closes—more than 340,000 person-years of employment will have been lost. The gap turns positive after that date, reclaiming just

over 100,000 person years by the end of 2040. It will take decades longer to achieve mass numerical neutrality. For individuals, though, there is no such assurance—job losers in the short run may not be the job gainers in the long run.

Figure 2

Employment levels, base vs. simulation 2



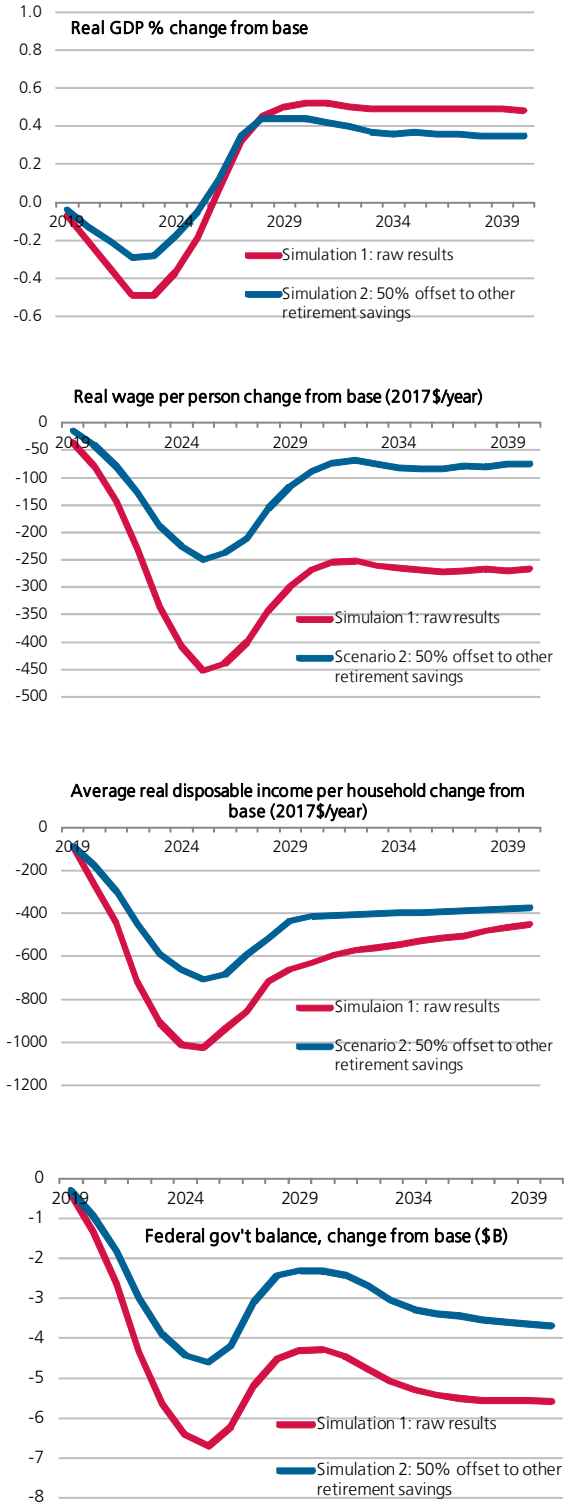
Getting back to other key economic indicators, the patterns are similar to that of employment (see Figure 3). Under Simulation 2, GDP is kept to 0.29 per cent less than it would have been under no CPP/QPP enhancement by 2022, but rebounds to being 0.35% above the base case by the end of the forecast horizon due to the build up of the CPP/QPP capital pool.

The effects on real household disposable incomes, however, stay negative throughout—starting out with an maximum hit of about $700 (in 2017 dollars) in 2025, and still about a negative $400 per household even as late as 2040. Similarly, federal government deficits will worsen (assuming no change to fiscal policy) in the vicinity of $4 billion per year because of higher employment insurance payments in the early years and constrained incomes later on.

While the long term effects tend to balance out, the shorter-term effects are non-trivial. Governments, both federal and provincial should have at least presented studies such as this to the public when the policy debate was taking place. The additional information may not have completely turned reforms around, but it would have spurred reasoned discussion on how governments might be able to blunt the short-term adverse effects.

Figure 3

Simulation impacts on GDP, earnings and federal balances



Findings: how to minimize adverse impacts, strengthen positive ones

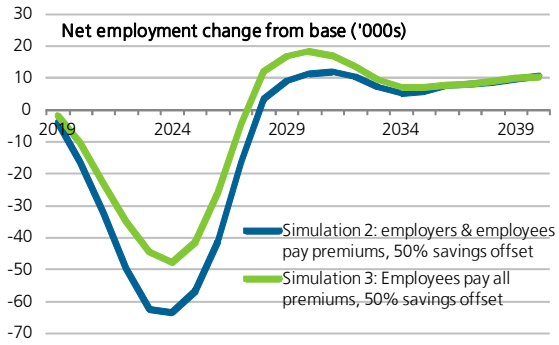
With Simulation-2 now acting as the reference scenario, the FOCUS model allows one to adjust the sourcing of the premium payments and compare results. For Simulation-3, employees are asked to be responsible for the entire dollar value of premiums necessary to support their expanded benefits.

This purer form of forced savings is a perfectly fair request to make of employees because they receive the additional benefits in their entirety (albeit pooled). It is not a tax, but simply a transfer of income to the future.

The effects under Simulation-3 are significant in both a short term and long term sense. The maximum employment hit in 2024 falls to 47,800 jobs rather than the 63,500 in Simulation-2 (see Figure 4). It shows, as hypothesized, that an employer premium has a stronger negative effect on short term employment as an employee premium. In the long run, the two scenarios converge.

Figure 4

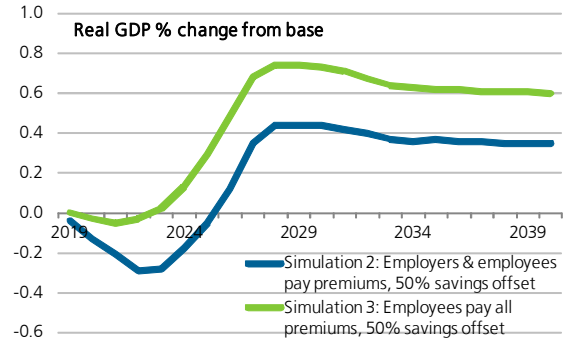
Enhanced CPP/QPP simulations 2 and 3 on employment

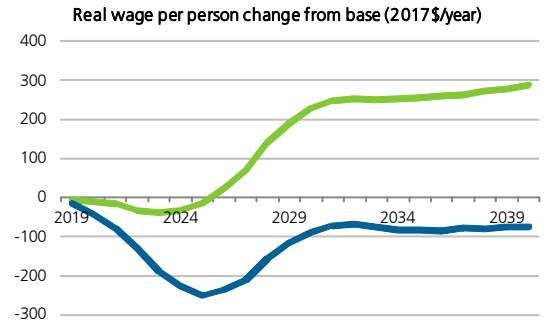


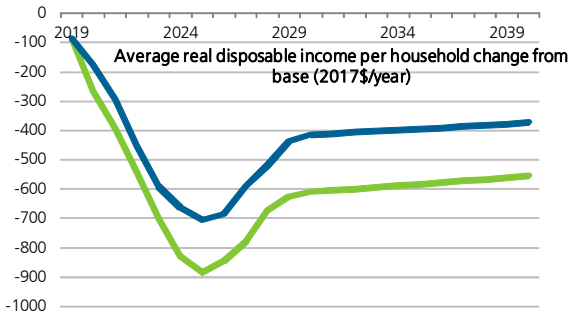
Similar effects can be found in the other key economic measures. With the improved labour cost profile for employers, Simulation-3 wages go up an average of $400/year per person in constant dollar terms by 2040 over and above Simulation-2 levels (see Figure 5). In fact the wage profile is even higher than that under the non-enhancement base scenario because of the productivity improvements caused by the bigger CPP/QPP capital pool.

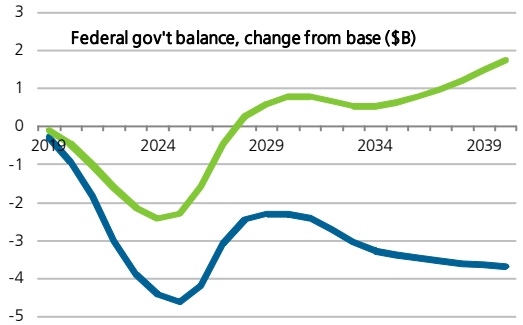
Figure 5

Simulation impacts on GDP, earnings and federal balances









Disposable incomes are lower because of the additional employee premiums, but likely it is only temporary because the full force of higher benefits payments would not be getting started for another 20 years beyond the projection horizon.

GDP and federal balances turn almost completely positive under this scenario as well because the employment and personal income hits are not as severe as under Simulation-2.

Conclusions

Had the federal government presented this type of neutral, forward thinking analysis on the pension and economics math of an enhanced CPP and QPP, it would have completely changed the nature of public discussion—for the better.

It would have ensured that the focus remain on to what degree should the state be making peoples' savings decisions for them and, if so, how enhancements should best be structured to meet their true needs, while at the same time ensuring that any negative impacts would be limited as much as possible.

Instead, we saw the debate focus on a false premise that employers don't pay enough for their employees' retirements. These study findings, along with the long list of evidence from the literature show that employees incur the costs and the benefits either way. The problems occur from the adjustment process when employer-paid premiums slowly and painfully have to grind their way through the economic gears to land at lower wage levels.

There is no question that an employee-pay-all approach would have raised scepticism from the general public and would have been a harder sell politically. However, opening up the discussion along that dimension would have resulted in a more honest display of policy making, more likelihood of reaching a broader consensus and definitely a better result in net terms for Canadians.