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# THE SOCIAL DISCOUNT RATE

**CIRANO Note, prepared by Claude Montmarquette, January 2008**

Quebec is currently the stage for a series of debates on which investments are required of the government, whether in infrastructure, education, healthcare, etc. Where to begin? What projects to prioritize? These investments give rise to a series of questions, not the least of which is how they should be financed. Some suggest making more room for the private sector, which would be willing to invest in various public infrastructures, while others maintain that the government should always be the funding agent—arguing that the interest rate on government borrowing is lower than that paid by the private sector.

This debate is complicated, and it is important that we come to terms with the issues. On one hand, the government cannot make all the investments in an economy, as the burgeoning debt load would hamstring the government and leave it vulnerable to interest rate hikes or economic downturns. Too much debt would undermine Quebec's credit rating and increase the cost of its entire debt load. On the other hand, the government remains responsible for administering services to its constituents, and no government has succeeded in fulfilling this mission without retaining control over some key investments on its territory.

Consequently, it is necessary to understand under which conditions the government must invest. It will always be confronted with a wide array of projects, and a method for comparing them is required. The interest rate on loans is one factor to consider, but the risk associated with the project and the social opportunity cost of capital must also be counted.

The concept of risk is simple: A project may be accompanied by a variety of unknowns that increase its cost and affect its benefits. Thus, project evaluation must account for all possible outcomes, not only the best case scenario.

The social opportunity cost of capital is a little more abstract and encompasses several dimensions. Its net impact is to cause the true cost of financing a project to deviate from the rate of interest on borrowed moneys. The core notion is as follows: When borrowing, the government taps into financial capital that could have been used by the private sector. Now, the private sector project would have generated tax revenues that are forgone by the government if this project is supplanted by a public project. This revenue, lost to the government, is a cost associated with the project. Moreover, taxes on income create distortions in the labour market. These are further costs created by the government's presence in the economy.

The discount rate must account for all these elements—not only the interest rate. It also provides a basis for comparing the costs and benefits of investment projects that are spread over several periods. This is a critical element for computing the intergenerational balance in project evaluation. A rate that is too high might overvalue the present at the expense of the future—and vice versa.

In light of the urgent nature of the investments required in several sectors, it is essential that a policy on the discount rate for use by Quebec's public sector be adopted. A clear direction with regard to the social discount rate is needed to ensure that future projects, be they private-public partnerships or more traditional developments, are properly valued.

For Canada, the Treasury Board has established the real social discount rate at 10 per cent (or 7.6 per cent above the risk premium). This rate reflects the social opportunity cost of government investment and does not correspond to the cost of borrowing for the Government of Canada. Unlike in France and the United Kingdom, this rate does not appear to have been revised in recent years, and some economists deem it too high.

While individual *ad hoc* studies have been in able to suggest social discount rates, to our knowledge there has been no systematic study of this issue in Quebec for purposes of assessing the yield to government investment projects. Following a review of the literature, and in light of the recent experience of France and the United Kingdom, we suggest a possible social discount rate for Quebec:[1]

- The Government of Quebec's nominal discount rate should be 8 per cent (given that the target inflation rate of the Bank of Canada is 2 per cent).
- When assessing investment projects, the Government of Quebec ought to use the "certainty equivalent" method, and ensure that all risks associated with the project are identified and correctly quantified. "Certainty equivalent" simply means that the amounts under consideration account for all project risks. It is essential to avoid basing investment decisions on scenarios that are excessively optimistic and have little chance of materializing.
- It would be worthwhile to review the social discount rate at least once every five years, and to develop a solid expertise in this area in Quebec.

In conclusion, the social discount rate is a crucial economic calculation for evaluating government projects, and is even more important in the framework of public-private partnerships. In light of the scarcity of available funds, and confronted with considerable needs, government projects must be evaluated rigorously.

[1] Montmarquette C. and I. Scott, "Taux d'actualisation pour l'évaluation des investissements publics au Québec," May 2007, CIRANO, 2007-RP02, 35 pages.