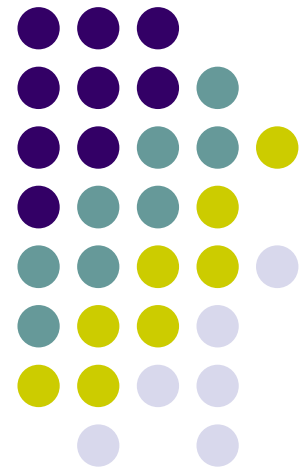

Contribution of the elderly to public expenditures financing

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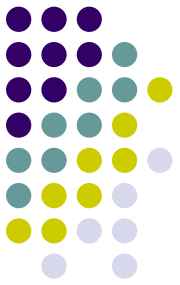
1. Introduction
2. Context in which the notion of intergenerational equity emerges
 - Recurrent deficits and high government debt
 - Population ageing and social programs
3. Relative cost of social programs by major age groups
4. Relative participation to public financing by major age groups
5. Financial burden : past and future
6. Conclusion



1. INTRODUCTION

- Data from Québec from
 - Gauthier, Hervé, 2007. *Vie des générations et personnes âgées : aujourd'hui et demain*. Volume 2. Québec, Institut de la Statistique du Québec.
 - Chapitre 15 *Participation des personnes âgées au revenu national et au financement des dépenses publiques* par Madeleine Rochon
 - Chapitre 14 *La dépense sociale* par Hervé Gauthier (*Analyse par génération*)
 - http://www.stat.gouv.qc.ca/publications/conditions/vie_generat ion_vol2.htm
- Some canadian data (added)

2. Context in which the notion of intergenerational equity emerges



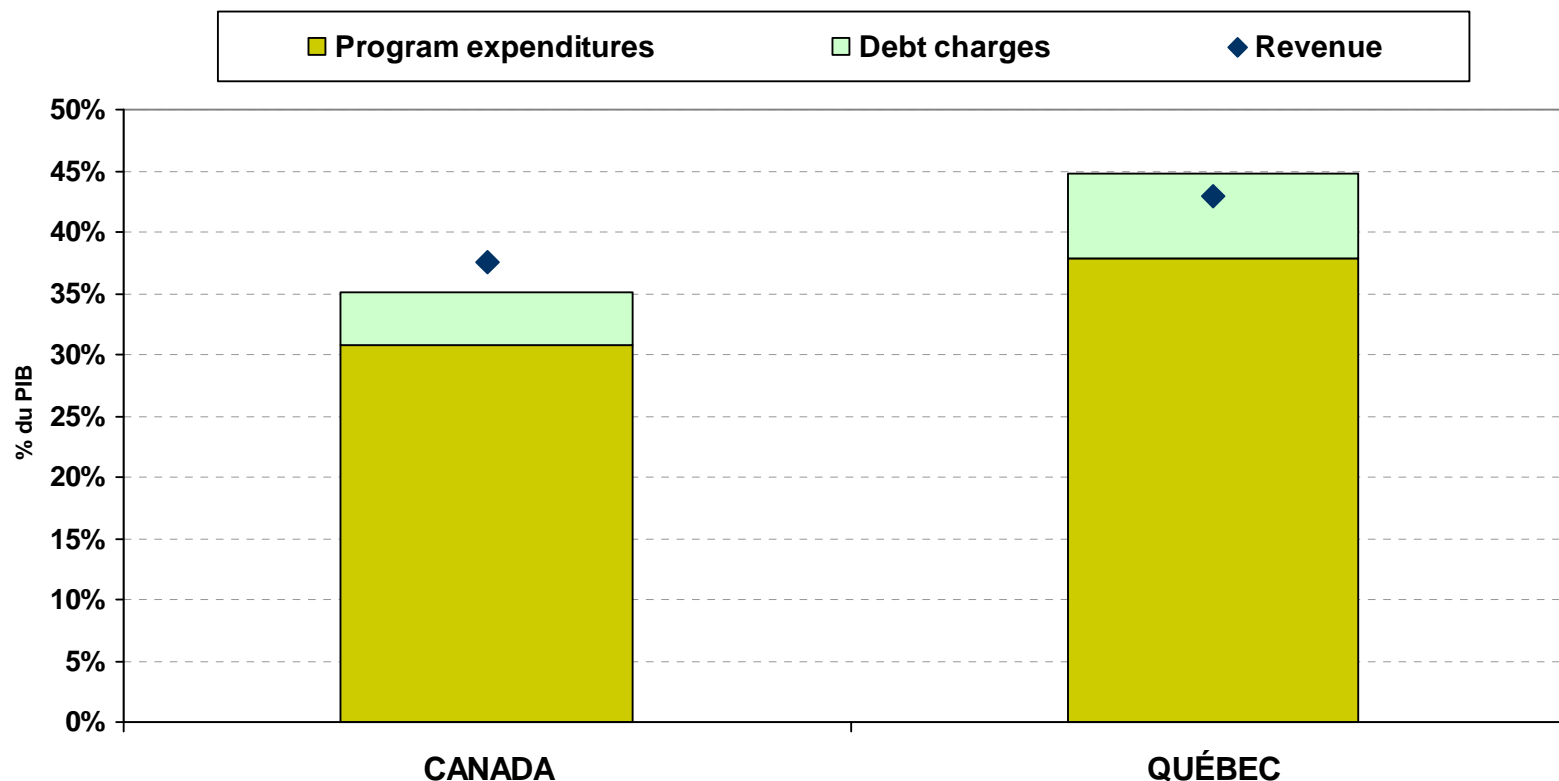
- Recurrent deficits and high government debt
 - Federal, provincial and local, including autonomous funds and organizations, the CPP / QPP, educational organizations, health care and social service organizations and school boards
 - *Source : Economic Accounts* (Statistics Canada)



Government debt to GDP ratio (in %)

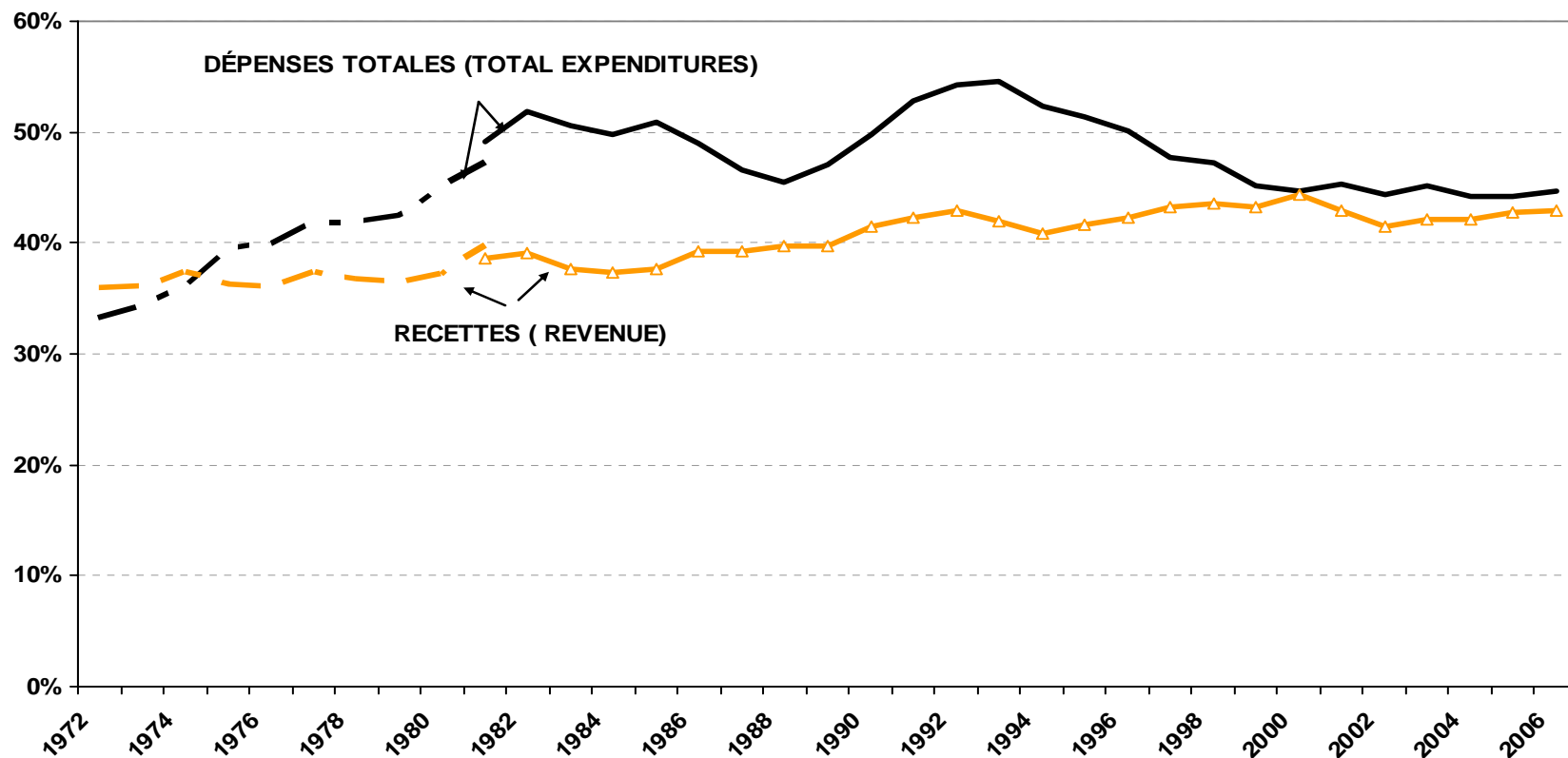
CANADA	1997	2006
General governments	96	54
Federal	66	35
Provincial and local	30	18
QUÉBEC		
Provincial and local	53	42

Government program expenditures, revenue and debt charges to GDP, Canada et Québec, 2006

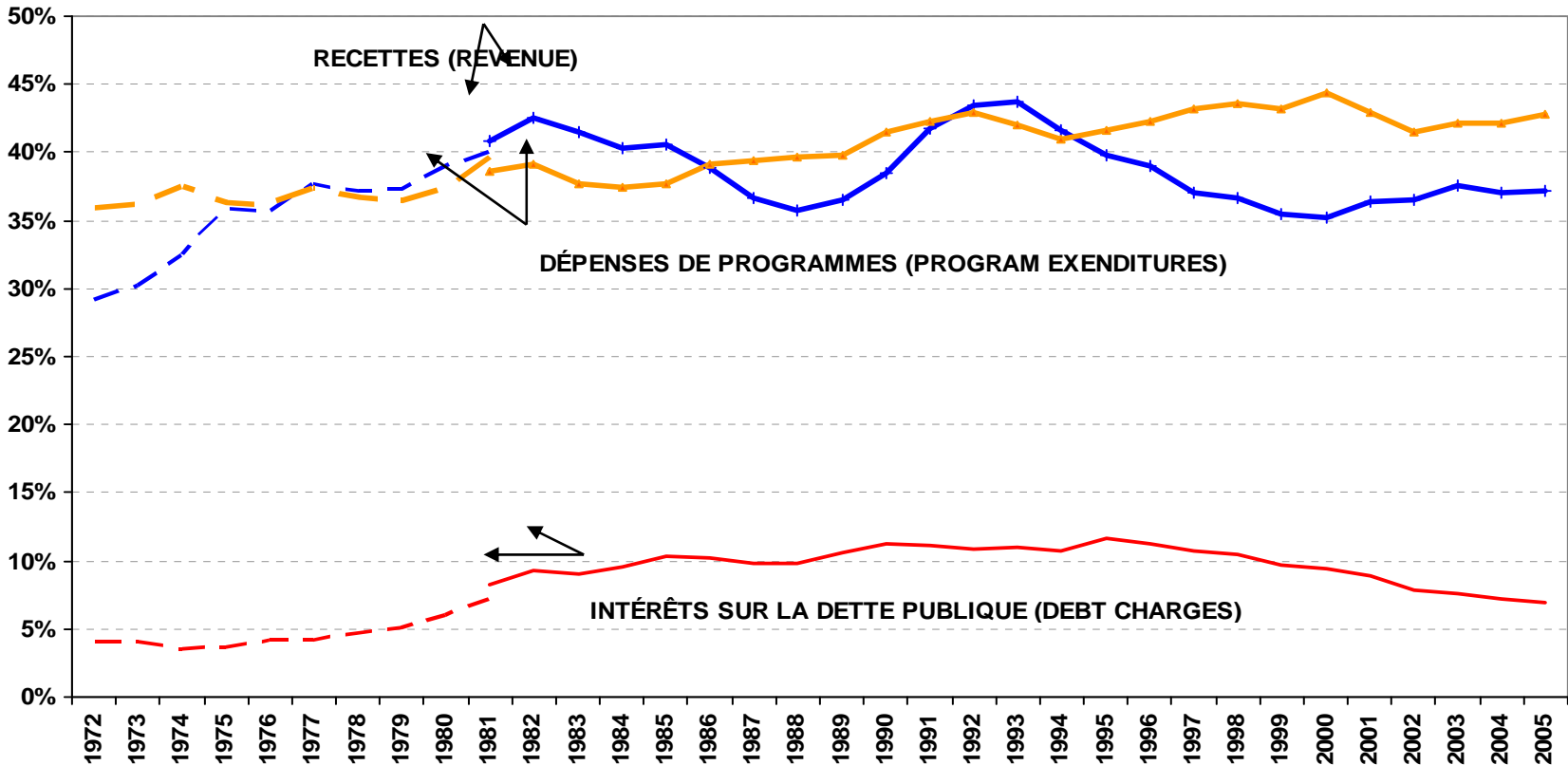


Sources : Statistics Canada and ISQ, Economic Accounts.

Government total expenditures and revenue to GDP ratio, Québec, 1972 à 2006



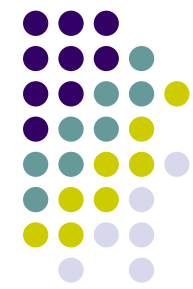
Government program expenditures, revenue and debt charges to GDP ratio, Québec, 1972 à 2006





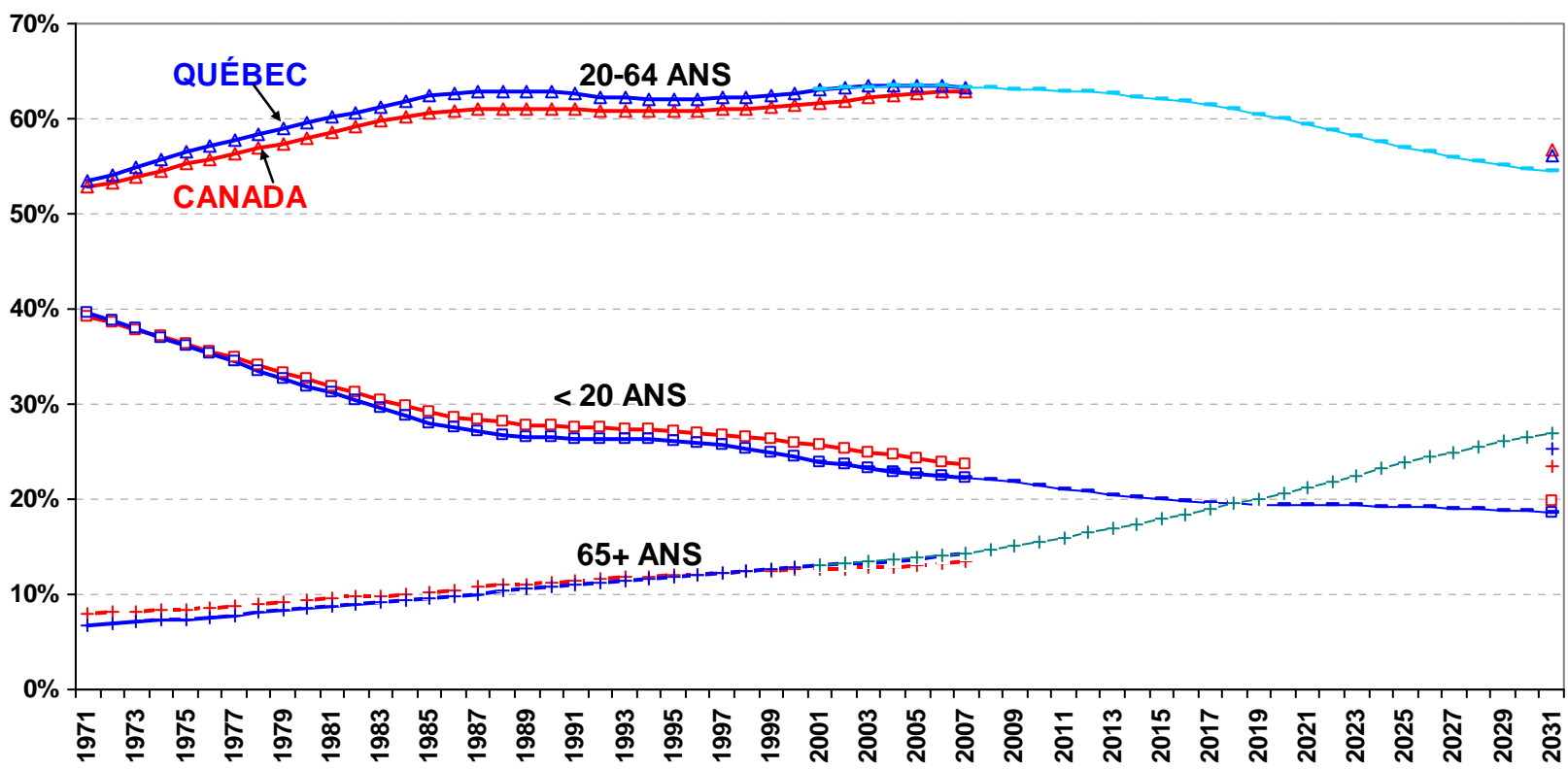
- **Population ageing and social programs**

- A favourable momentum that is ending
- Demographic dependency ratio and social programs

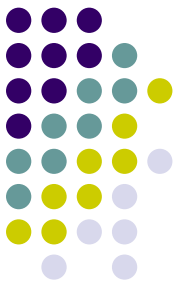


A favourable momentum that is ending

Proportion of the population by major age group

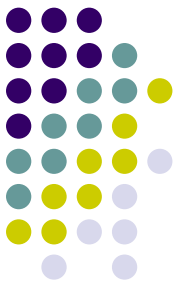


Demographic dependency ratio and social programs



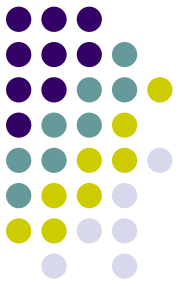
- Indicators more or less alarmist and adapted to all social and public expenditures
 - Most alarmist : 65+ years / 20-64 years
 - Adapted to a pension plan funded exclusively by a working-age group
 - Variation
 - 1971-2001 : + 35 %
 - 2001-2031 : + 101 %
 - Does not consider, for example, the employment rate of the 20-64 years old
 - 66 % in 1976 but 74 % in 2006
 - Does not consider the *contribution of the elderly to public expenditures financing*

Social expenditures: half of public expenditures



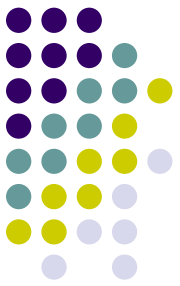
- In 2003, \$59,4 billions
 - on \$113,5 billions
 - Youth : 17,4
 - education : 11,3
 - family assistance : 6,1
 - Adults : 8,6
 - social assistance : 2,7
 - employment assistance : 0,8
 - employment insurance : 3,0
 - health and workplace health and safety (including the Pension Plan Disability Benefit) : 2,1
 - Seniors : pensions and public pensions : 13,6
 - Health and social services : 19,7
- Source : Gauthier, 2007

Government expenditures to GDP ratio, total and social programs, Québec

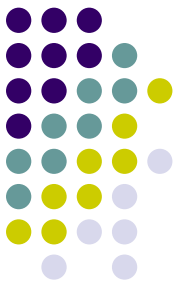


	Total expenditures	Social expenditures
	<i>in % of the GDP</i>	
1961	23,2	10,9
1971	32,8	17,0
1981	49,1	23,0
1991	52,9	27,3
2003	45,2	23,5

Sources : Statistics Canada, Institut de la statistique du Québec and Hervé Gauthier, 2007 for social expenditures



3. Relative cost of social programs by major age group, Québec
4. Relative participation to public financing by major age group, Québec



Examples:

Relative social expenditures per person :

65+ years compared to 20-64 years

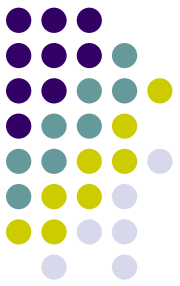
	20-64 years	65+ years	65+ years / 20-64 years
Social expenditures per person	Social expenditures / population 4 582 \$	Social expenditures / population 20 285 \$	4,43
Personal income taxes per person	Taxes / population 3 232\$	Taxes / population 1 682 \$	0,52

Relative contribution to public expenditures per person by major age group



	< 20 years	20-64 years	65+ years
1961	1,7	1,0	3,4
1981	2,1	1,0	4,6
2003	2,2	1,0	4,4

Source : Gauthier, Hervé, 2007



Relative contribution to public expenditures financing per person by major age group

	< 20 years	20-64 years	65+ years
1981	0	1,00	0,50
1991	0	1,00	0,58
2003	0	1,00	0,61

Source : Rochon, 2007

Government revenue, Québec

Total = 100



	1981	1991	2001	2004
Direct taxes from (Income tax)	41	41	43	42
- Individuals	33	36	34	31
- Corporations	7	5	8	9
Indirect taxes	41	39	35	37
- Taxes on production and imports	16	15	15	15
- General sales taxes	25	23	21	22
Contributions to social insurance plans and other current transfers from individuals	10	13	15	16
Investment income	9	7	6	6

References : SC et ISQ, Economic accounts

Income tax

(31 % of revenue in 2004)



Contribution per person from the 65+ years old population compared to that of the 20-64 years old population

	20-64 years	65+ years
1981	1,00	0,35
1991	1,00	0,56
2004	1,00	0,52

Source : Statistiques fiscales des particuliers, Québec Government, amount of tax payable by a specific age group divided by the population of that group.

Implicit hypothesis : Non-filers have no income

General sales taxes

(21 % of revenue, 2004)



Contribution per person of the 65+ years old population compared to that of the 20-64 years old population

	20-64	65+
1981	1,0	0,59
1991	1,0	0,74
2004	1,0	0,77

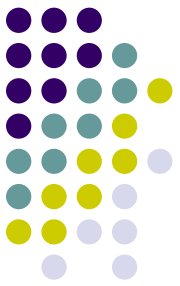
According to the *Survey of Household Spending*, **the share of income** allocated to convenience goods (excluding health care, most housing-related spending and grocery items) for households headed by seniors is very similar to that of other households (at least in 2004).

Hypothesis : the contribution of seniors is proportional to their income.

Contributions to social insurance plans and other current transfers from persons



- **Social insurance plans** : employment insurance, the Canada and Quebec Pension Plans and workers' compensation
 - 13 % of revenue in 2004
 - HYPOTHESIS : employer contributions are indirect wages. As a result, the contribution of seniors is practically proportional to their income.
- **Other**
 - 2 % of revenue in 2004
 - Includes premiums for prescription drugs insurance plan and for health services fund, the personal portion of motor vehicle licenses and permits, etc.



Contributions to social insurance plans and other current transfers per person

Relative contribution per person aged 65+
(One 20-64 years-old person =1,00)

	Total	Social security plans ¹	Others ²
1981	0,06	0,02	0,59
1991	0,10	0,02	0,70
2004	0,22	0,06	1,38

Sources : Statistiques fiscales des particuliers, Québec Government

¹Employment insurance premiums and to CPP / QPP

²Premiums for prescription drugs insurance plan and fo health services fund; data from the Société d'assurance-automobile du Québec



Contribution of seniors to active assets and to corporate profits

- Part of the dividends received by seniors (23,2 % in 2004).
- Very similar to the part of assets held by Canadian family units in which the major income earner is 65 years and older according to Statistics Canada *Survey of Financial Security* (24,0 % of all assets net value and 25,9 % of the value of private pension savings in 2005).

Taxes on income from corporations (9 (9 % of revenue in 2004)



Contribution of a senior compared to that of a 20-64 years old

	20-64	65+
1981	1,0	1,84
1991	1,0	1,49
2004	1,0	1,42

Source : Statistiques fiscales des particuliers, Québec Government, dividends by Canadian corporations.

The result is similar to that of Canadian family units assets as a function of age of the major income earner (Survey of Financial Security, Statistics Canada).

Indirect taxes on factors of production



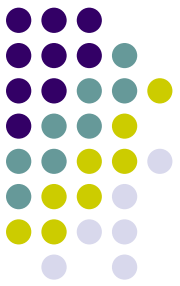
- **Property taxes (7,4 % of revenue in 2004)**

- Hypothesis : according to income
- Underestimation: a 65+ years old household devotes 3,8 % of its income compared to 2,3 % for a household < 65 years old (Survey of Household Spending, SC)

Index = 1,30 instead of 0,77

- **Other (7,2 % of revenue in 2004)**

- Taxes on payrolls and capital, and the costs of business licences, permits and fees
- Capital to GDP ratio : 68 %
- Labour to GDP ratio : 32 %



Indirect taxes on production factors, (15% of revenue in 2004)

Relative contribution of a senior (One 20-64 person =1,00)					
	Total	Property taxes	Others		
			Total	Capital ¹	Labour ²
1981	0,55	0,59	0,50	1,84	0,08
1991	0,60	0,74	0,41	1,49	0,06
2004	0,60	0,77	0,43	1,42	0,07

¹Canadian corporation dividends ²Work and business income according to *statistiques fiscales des particuliers*, Québec Government.

Investment Income

(6 % of revenue in 2004)

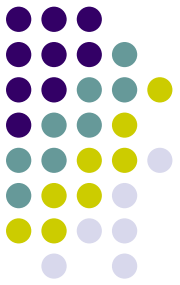


- No particular hypothesis
- Same contribution as for all other government revenues
 - 94 % of expenditures

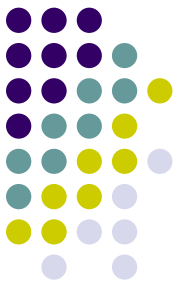


Higher contribution of the elderly in Canada than in Québec

- According to the federal government fiscal statistics, in 2004
 - Income
 - 0,87 compared to 0,80
 - Federal taxes to pay
 - 0,65 compared to 0,56
- Composition of governments revenues very similar but a few points below for indirect taxes and above for investment incomes in Canada



5. Financial burden : past and future



Variations of the social expenditures as a financial burden, 1981-2003 and 2003-2026, Québec (en %)

Period	Observed	Ratio*	Expenditures and relative contributions			
			Total	Constant	Observed	Work
1981-2003	2	- 13	4	- 4	14	-6
2003-2026	?	33	?	19	?	?

* Total demographic dependency ratio (< 20 and 65+ / 20-64)

** Demographic projections from ISQ

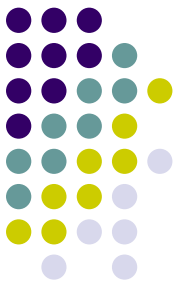
Rise of the financial burden to come, 2003-2026 (in %)



				Detailed calculation
	Population < 20 and 65+ / 20-64 years	Social expenditures / Revenue	Total expenditures ¹ / Revenue	Total expenditures / Revenue
<i>Projected population (Statistics Canada)</i>				
Canada ²	17	11	5	
Québec	26	16	7	
<i>Projected population (Institut de la statistique du Québec)</i>				
Québec	33	19	10	9
Without rise <u>RPC/RRQ</u>				7

¹ Other program expenditures increase as a function of the population

² Caused only by ageing, relative expenditures and revenues by major age group are constant (and equal to that of Québec in 2003)



Evolution of the contribution of both major age group populations to the financing of public expenditures

	Variation in % ¹		
	Total	20-64 yrs	65+ yrs
<i>Projected population (Statistics Canada)</i>			
Canada ²	25	13	98
Québec	12	1	92
<i>Projected population (Institut de la statistique du Québec)</i>			
Québec	8	- 4	97
¹ The relative contribution of each age group is constant (and equal to that observed in Quebec in 2003)			



Share of the 65+ years old, Québec (in %)

Year	Population	Public revenues
1981	12,7	6,8
1991	15,0	9,3
2001	17,2	11,2
2011	20,2	13,8
2021	26,4	18,2
2031	33,1	22,9



Evolution of this relative contribution of seniors in the future

- In Québec, a possibly narrowing gap
- Rise of income for the female senior population (+ 16 %)
- Increases in wages and in employment rates are also possible



CONCLUSION

- Two phenomena to consider
 - Contribution of the elderly to public expenditures financing
 - Fraction of the working-age population with paid employment
- Total government spending and not one sector only
- Other factors
 - Productivity and general economic environment
 - Evolution of programs and of the use of services



CONCLUSION

- **Health : burden or industry of the future? Major driving force of the XXIth century economic growth according to Fogel, 2004.**
 - Basic needs (food, housing, clothes) :
80 % of household spending at the start of the XXth century compared to one third today with superior volume and quality.
 - Total health expenditures rise more than wealth but this is not the case for public expenditures since the beginning of the 1980's (GDP fluctuations of 1 %).

FIN

- Thank you

