

Income Inequality Among Seniors in Canada: the Role of Women's Labour Market Experience

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Motivation

- Issue: incomes of seniors
 - Elderly poverty
 - Adequacy of income support programs
- Income inequality among seniors
 - \Rightarrow inequality in access to health services
 - \Rightarrow inequality in life expectancy
 - Preference for redistribution
- What drives changes in the senior income distribution?
 - Targeted policy response

Figure 1 - Poverty and inequality, elderly married couples

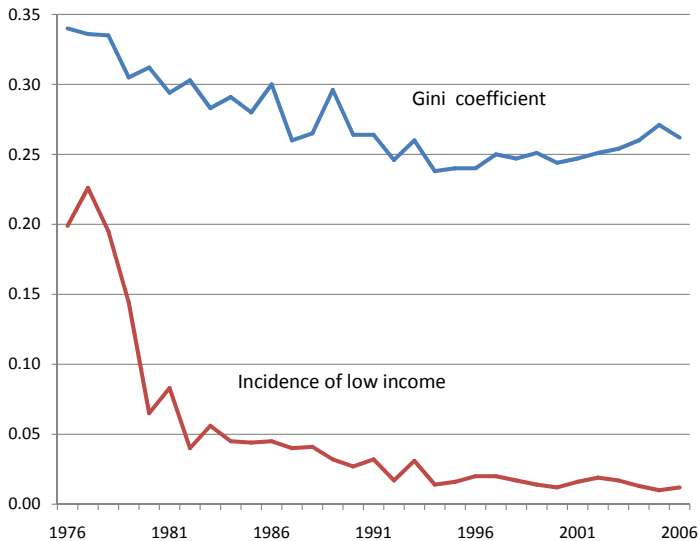


Figure 3 - General increase in income and income inequality

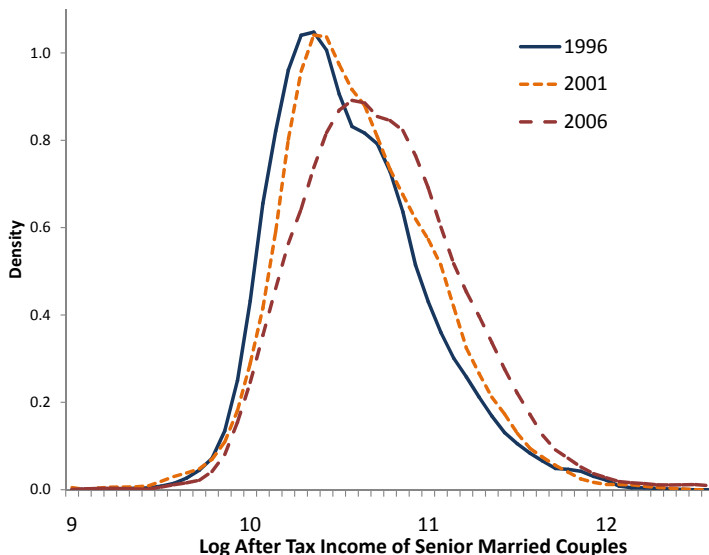
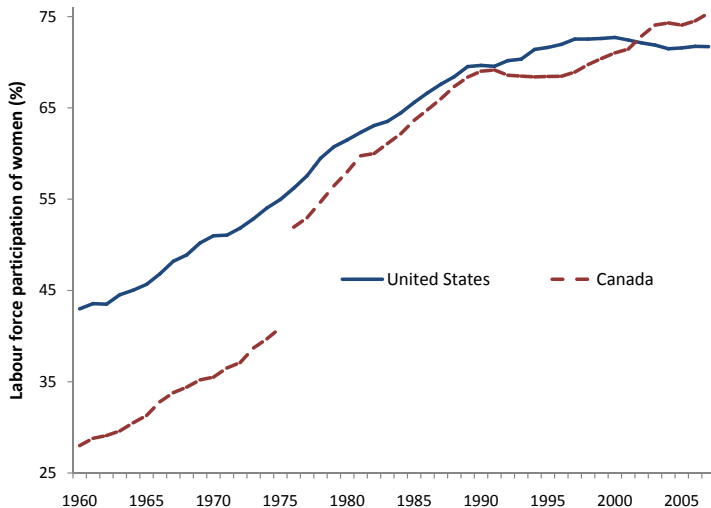


Figure 2 - Labour force participation of women



- Objectives:

- Document changes in distribution of senior family income 1996-2006
- Role of women's experience, employment, public and private pension
- Role of other characteristics, men's employment, pensions

- Preview:

- Distribution shifts: women's pension, employment
- Dinequalizing effects: education, men's employment
- Equalizing effects: women's CPP/QPP, men's pension, women's FTFY exp.

- Survey of Labour and Income Dynamics (RDC)
 - 1996, 2006
 - Married couples, oldest spouse age 65-79
 - Senior income
 - = couple's after tax income + RRSP withdrawals
 - 2006 dollars

Key variables

- Income Sources
 - Employment = + earnings
 - Pension access = + RPP, RRIF, RRSP
 - CPP/QPP access = + CPP/QPP
- Characteristics
 - Education, Age
 - FTFY equivalent experience

Also consider:

- Poor health, immigrant status, number of children, urban, province
- Women's age at first birth, age first marriage, married more than once, single generation in economic family

Table 1: Changes in the senior income distribution

| | 1996 | 2006 | % Change |
|-------------|-------|-------|----------|
| Percentile | | | |
| 10 | 23678 | 26405 | 11.5 |
| 50 | 35141 | 43301 | 23.2 |
| 90 | 65866 | 79477 | 20.7 |
| Gini | 0.250 | 0.255 | 2.1 |
| Sample size | 1719 | 1409 | |

Table 2: Changes in income sources

| | 1996 | 2006 | Notable |
|----------|------|------|-------------------|
| <hr/> | | | |
| Wives | | | |
| Earnings | .17 | .28 | top ↑ 19 pts. |
| Pensions | .28 | .47 | middle ↑ 23 pts. |
| CPP/QPP | .56 | .73 | low, middle ↑ 22+ |
| Husbands | | | |
| Earnings | .21 | .35 | top ↑ 21 pts. |
| Pensions | .66 | .74 | low ↑ 18 pts. |
| CPP/QPP | .94 | .95 | |
| <hr/> | | | |

Tables 3-6: Changes in characteristics

| | 1996 | 2006 | Notable |
|-----------------|------|------|------------------|
| Wives | | | |
| <= Gr.8 | .34 | .21 | middle ↓ 16 pts. |
| University | .04 | .10 | top ↑ 15 pts. |
| FTFY | 16 | 19 | low ↑ 4 |
| Husbands | | | |
| <= Gr.8 | .39 | .21 | low ↓ 23 pts. |
| University | .09 | .17 | top ↑ 13 pts. |
| FTFY | 42 | 39 | |

Tables 3-6: Changes in characteristics

| | 1996 | 2006 | Notable |
|------------------------|------|------|---------------|
| Wives | | | |
| Poor health | .07 | .05 | low ↑ 3 pts. |
| Immigrant | .29 | .24 | ↓ tails |
| Age first married | 23 | 23 | top ↓ |
| Married more than once | .10 | .14 | low, middle ↑ |
| Family | | | |
| Number of children | 3.61 | 3.12 | |
| Urban | .81 | .75 | |
| Single generation | .78 | .84 | low ↑ 12 pts. |

Decomposition of Changes in the Income Distribution

- Firpo, Fortin, Lemieux (2007) combines methods from
 - Dinardo, Fortin, Lemieux (1996) - counterfactual distribution & statistics
 - Firpo, Fortin, Lemieux (2009) - unconditional quantile / recentered influence function regressions
 - Oaxaca-Blinder decompositions

Stage 1: Overall Composition and Structure Effects

- 1996 (ν_0), 2006 (ν_1)
- DFL (1996) reweighting (ν_C)
→ Counterfactual - 2006 composition with 1996 structure

$$\bullet \hat{\Delta}_O^\nu = \underbrace{(\hat{\nu}_1 - \hat{\nu}_C)}_{\text{structure}} + \underbrace{(\hat{\nu}_C - \hat{\nu}_0)}_{\text{composition}}$$

Stage 2: Contribution of each factor

- Firpo, Fortin, Lemieux (2009)
- Unconditional quantile / RIF regressions

$$\rightarrow \gamma_0^\nu, \gamma_1^\nu, \gamma_C^\nu$$

- Contributions to composition effects

$$\hat{\Delta}_X^\nu = \left(\sum_{i=1}^N \hat{\omega}_1^*(T_i) \cdot X_i \right) \cdot \hat{\gamma}_C^\nu - \left(\sum_{i=1}^N \hat{\omega}_0^*(T_i) \cdot X_i \right) \cdot \hat{\gamma}_0^\nu$$

Figure 4 - Composition effects (1996 vs. Counterfactual)

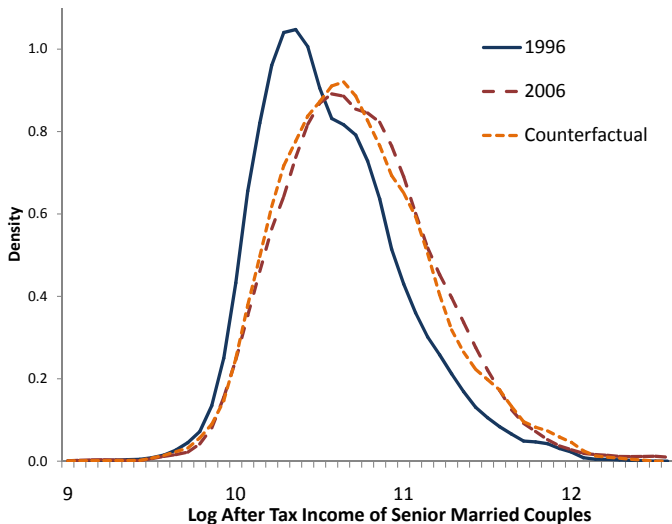


Figure 5 - Composition effects (1996 vs. Counterfactual)

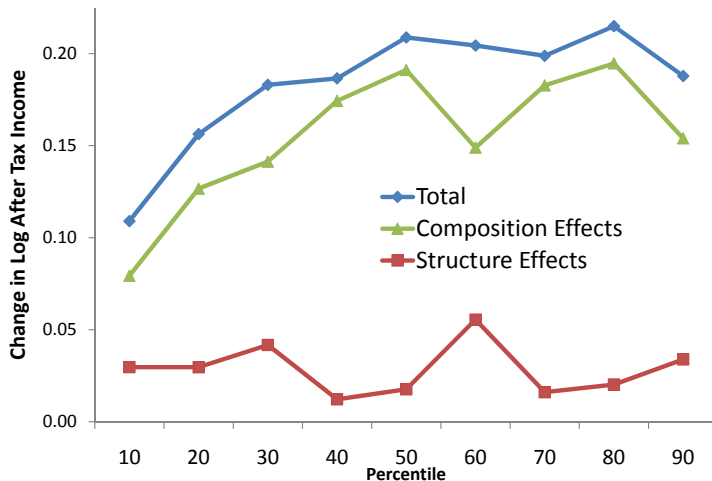


Table 8 - Log After Tax Income, 1996

| Percentile | 10th | 50th | 90th |
|-----------------------|-----------------|------------------|------------------|
| Wives - Employment | 0.118 (.035) | 0.287 (.047) | 0.260 (.105) |
| Wives - Pension | 0.043 (.019) | 0.206 (.039) | 0.101 (.088) |
| Wives - CPP/QPP | 0.085 (.030) | 0.122 (.037) | -0.022 (.075) |
| Husbands - Employment | 0.071 (.029) | 0.137 (.040) | 0.305 (.089) |
| Husbands - Pension | 0.220 (.031) | 0.344 (.033) | 0.165 (.053) |
| Husbands - CPP/QPP | 0.491 (.099) | -0.074 (.055) | -0.255 (.150) |

Figure 6 - Decomposition of composition effects

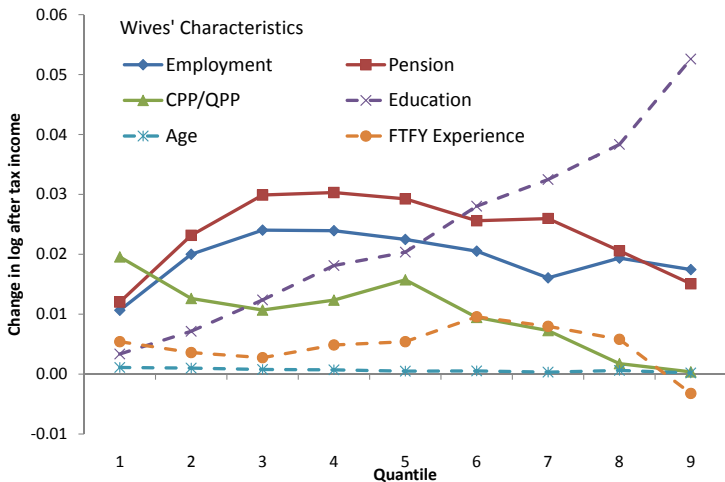


Figure 6 - Decomposition of composition effects

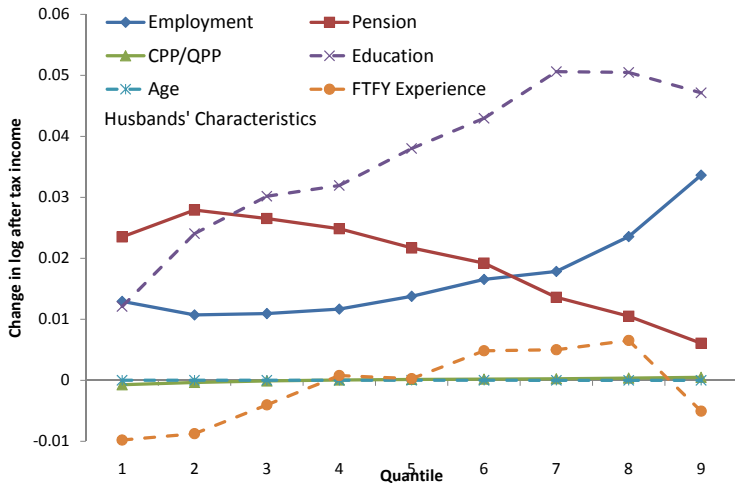


Figure 7 - Decomposition of composition effects

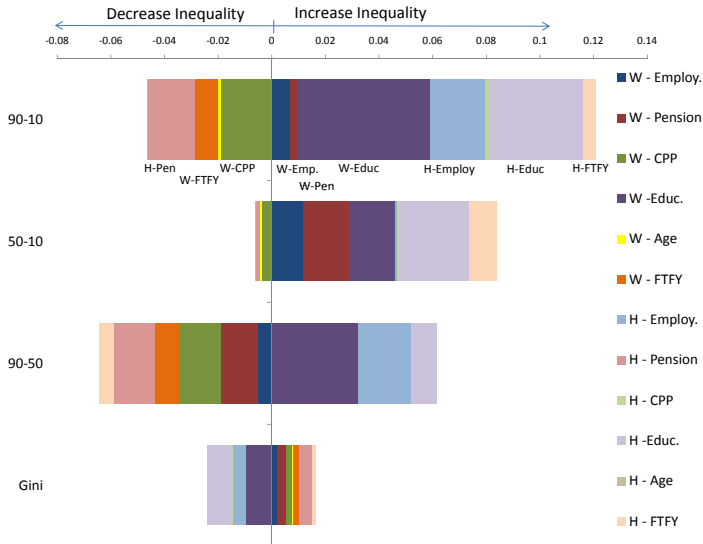


Figure 15.C. - Other characteristics

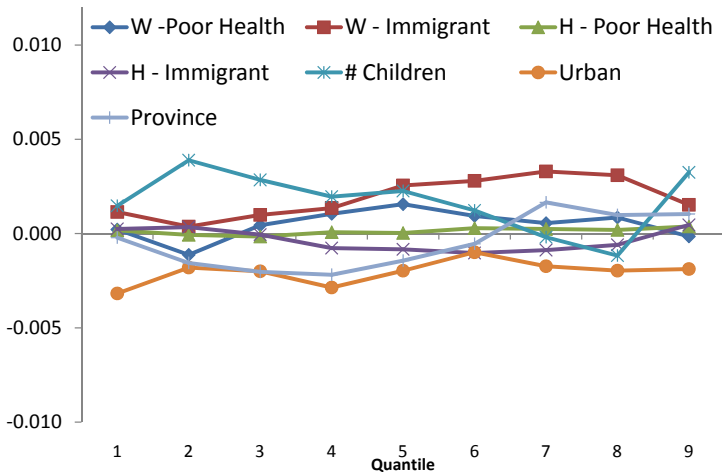
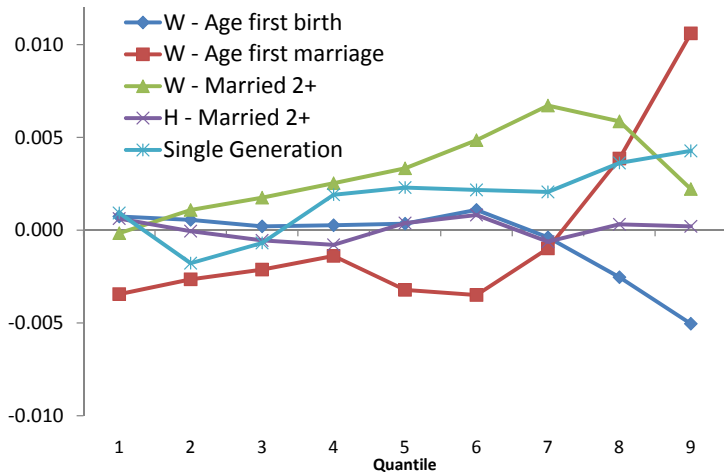


Figure 16.D. - Other characteristics



Results robust to:

- Inclusion of other variables
- Exclusion of RRSP income
- Wages vs. earnings (self-employment)
- Inclusion of observations without FTFY response
- Only income sources vs. only education, age, FTFY

Key Results

- Changes for women are worth considering
 - Employment & pensions - increase senior incomes
 - CPP/QPP - important equalizing effects
 - ↑ FTFY experience - modest effect
- Driving inequality - education, men's employment
- Equalizing effects - men's pensions

Policy Implications

- C/QPP plays important role - expansion?
- Young women's LF attachment
 - pensions, C/QPP for seniors
 - EI maternity leave, child care