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Ageing Europe – An Application of
National Transfer Accounts for Explaining
and Projecting Trends in Public Finances

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Labor Force Participation of Older Women in Sweden

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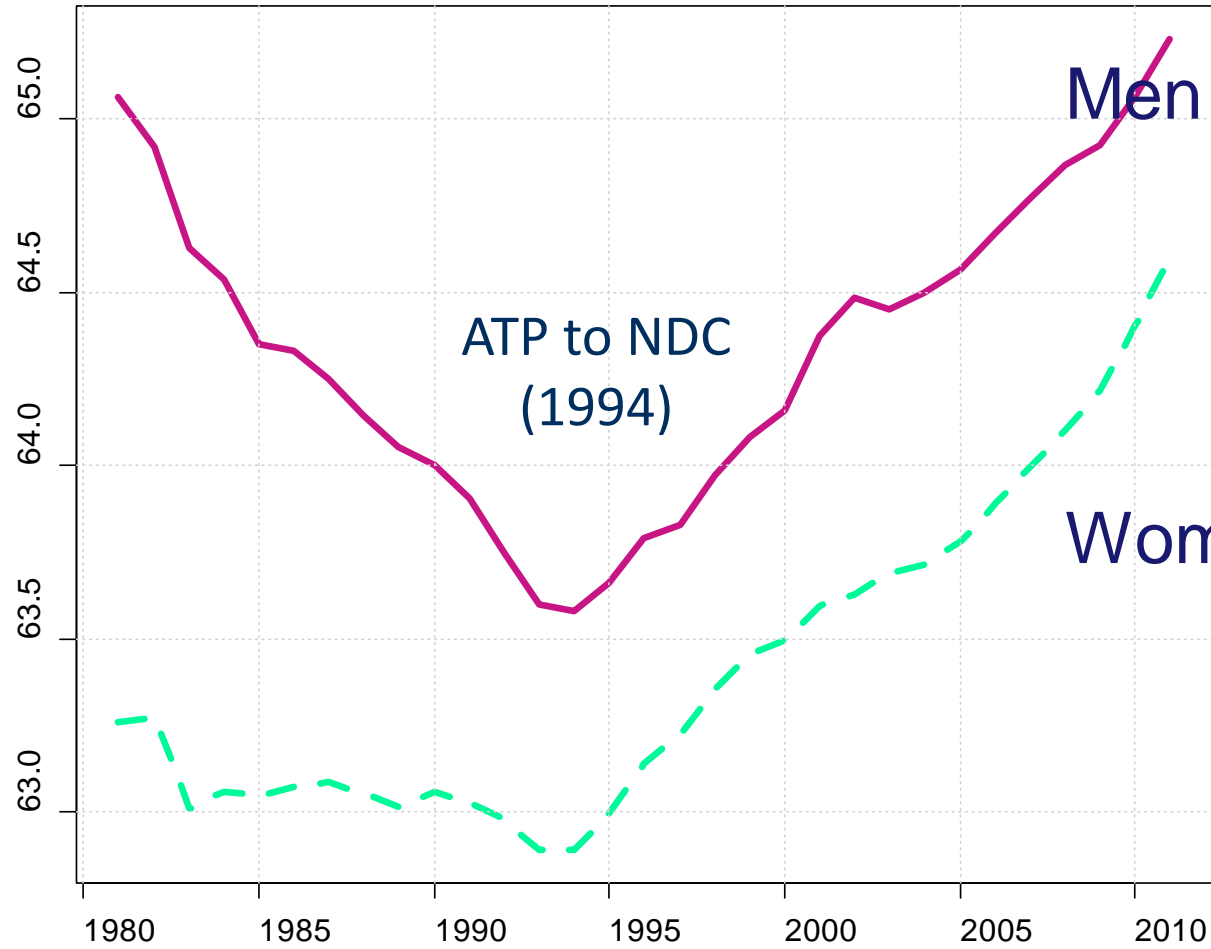


**Stockholm
University**

Why Older Women?

- Their labor supply behavior has been less understood, compared to older men.
- In the past, few women working at older age (e.g. at 65)
- But now...

Retirement Age by Gender, Sweden



Note: Own Calculation using Swedish Income Register

NDC

Affected those born in 1938 and later

Cohort-specific treatment

1938: 20% NDC + 80% ATP

1939: 25% NDC + 75% ATP

...

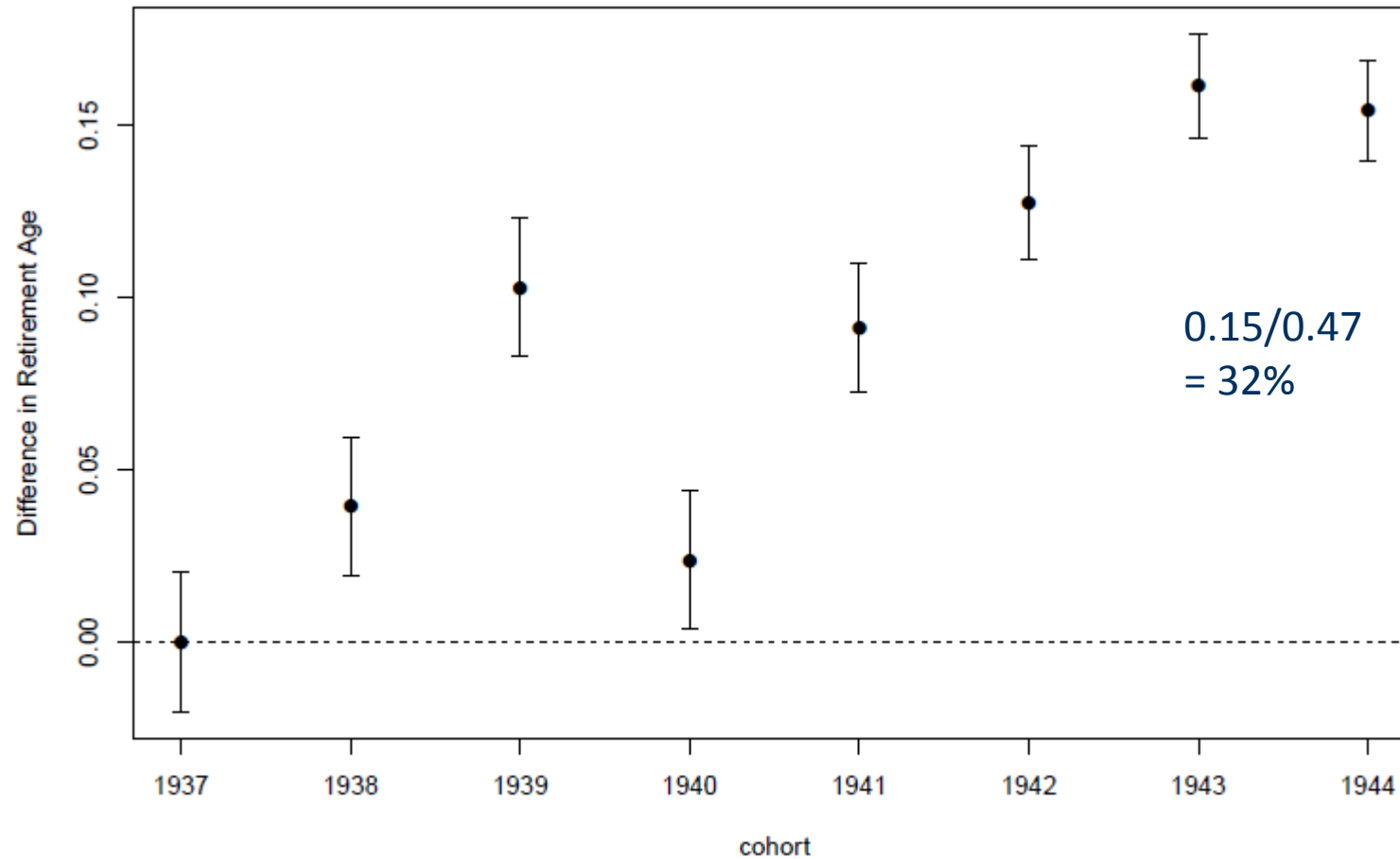
1954: 100% NDC + 0% ATP

Changes in Pension from ATP to NDC



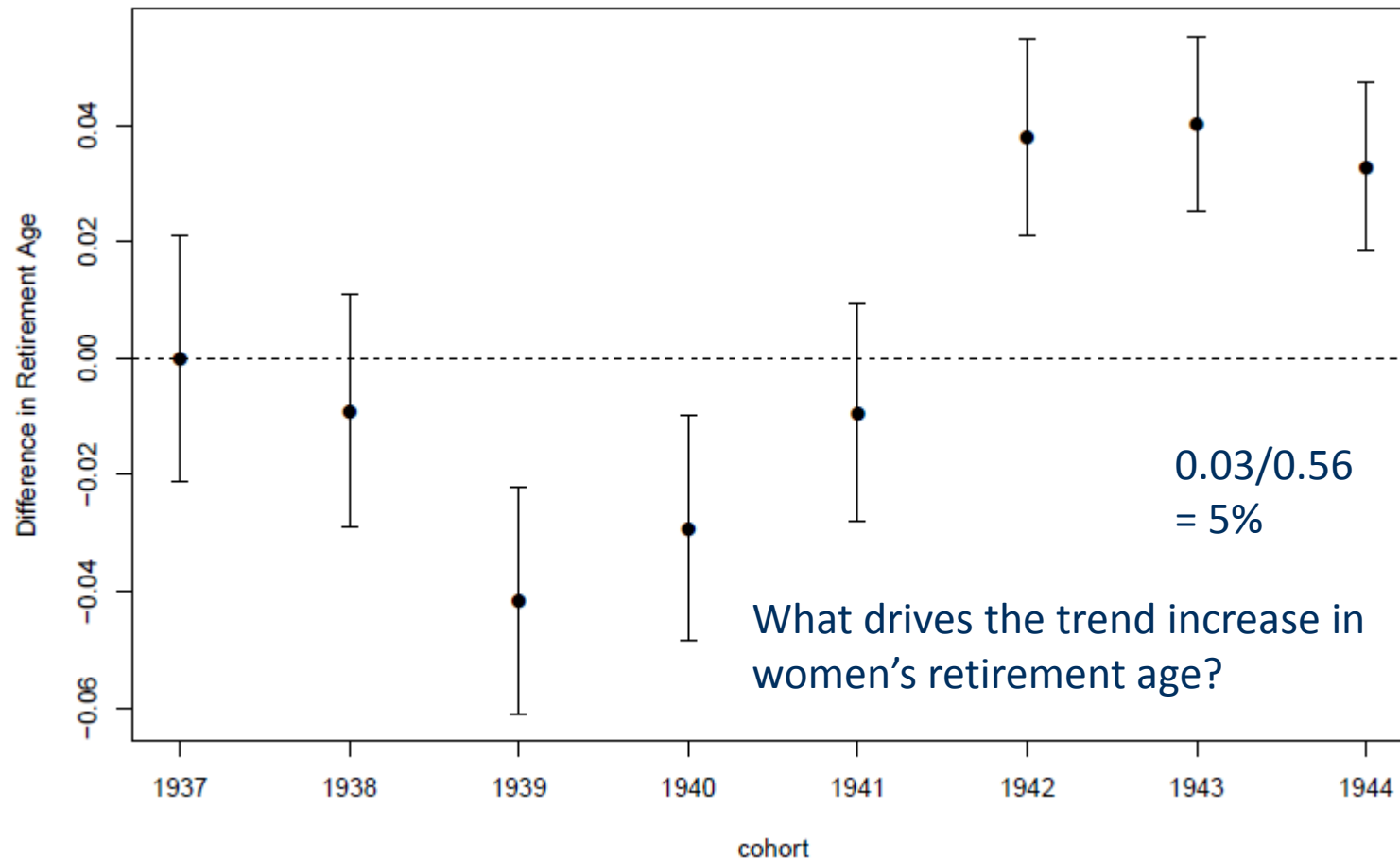
Qi et al., (2016)

Effects of Pension Change on Men's Retirement Age



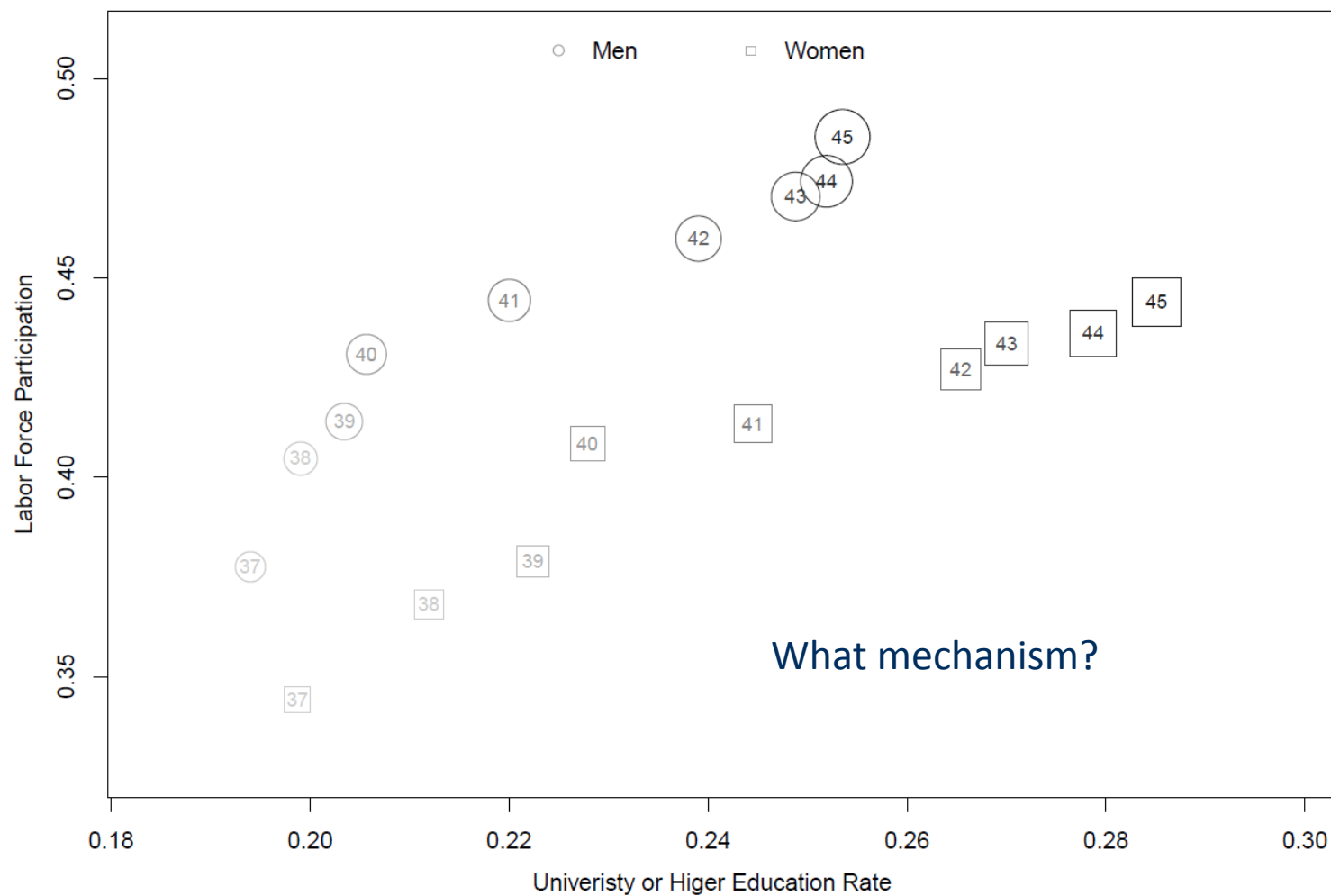
Qi et al., (2016)

Effects of Pension Change on Women's Retirement Age



Qi et al., (2016)

Education and Old-Age LFP by Cohort, Sweden



What mechanism?

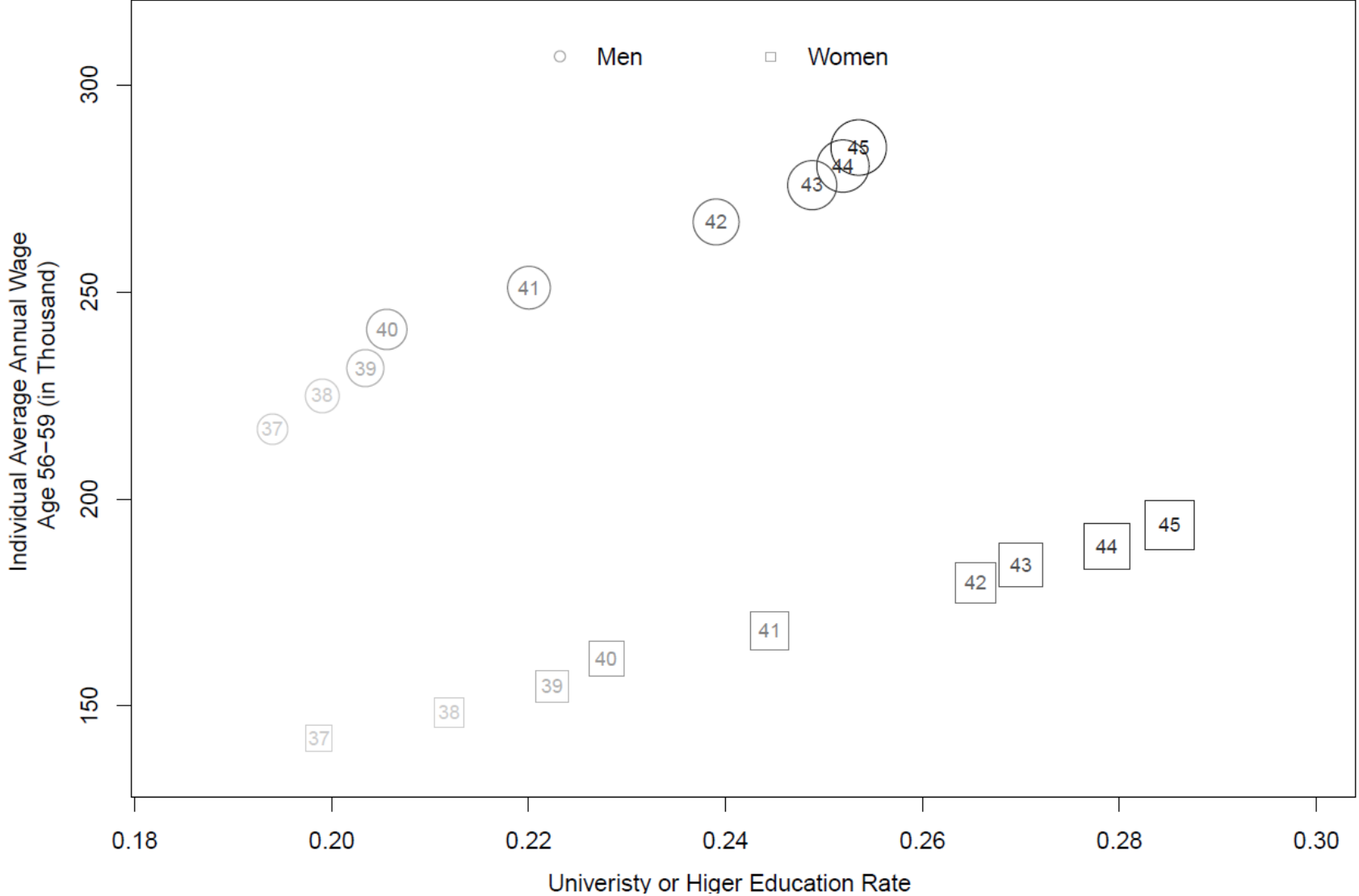
Direct vs Indirect Effect

- Direct (e.g. jobs are more fulfilling/exciting)
- Indirect (Heckman, 1973)

Higher education (HC Endowment) increases earning capacity

Higher earning increases labor supply (Inter-temporal Substitution Effect)

Education and Earning Capacity by Cohort, Sweden



Decomposing Direct and Indirect Effect of Education

$$dW(i, c) = dB_W(c) + \beta_W(c)dX(i, c) + d\epsilon_W(i, c)$$

$$dL(i, c) = dB_L(c) + \beta_L(c)dX(i, c) + \gamma_L(c)dW(i, c) + d\epsilon_L(i, c)$$

$$dL(i, c) = dB(c) + \boxed{\beta_L(c)dX(i, c)} + \boxed{\gamma_L(c)\beta_W(c)dX(i, c)} + \gamma_L(c)d\epsilon_W(i, c) + d\epsilon_L(i, c)$$

Direct

Indirect

Decomposition Results

Table 4: Effects of Rising Initial Human Capital Endowment on LFP

	Men	Women
Direct (Leisure Effect)	-0.003 (-2.8%)	-0.008(-8%)
Indirect (Substitution Effect)	0.008 (7.4%)	0.020 (20%)
Net Effect	0.005 (4.6%)	0.012 (12%)

Note: percentage contribution to total change in LFP in parentheses.

Summary

- Older women's LFP increased as much as older men
- But NOT due to reduced pension, rather due to increased earning
- Earning increase is partly driven by their human capital development

- Message:
Keep Educate Yourself, a KEY to sustain/improve earning capacity