

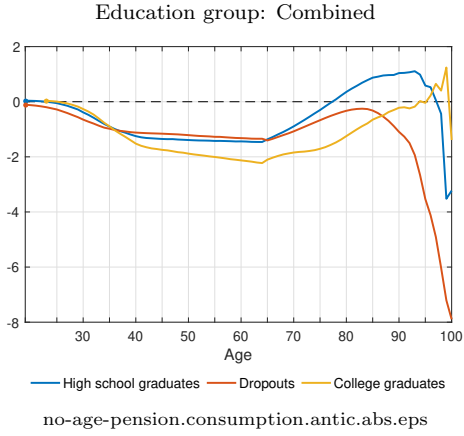
1 Policy: No age pension

Complete elimination of age pension

1.1 Simulated moment: Consumption

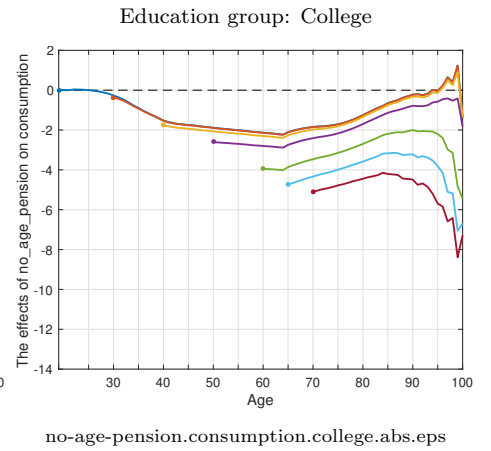
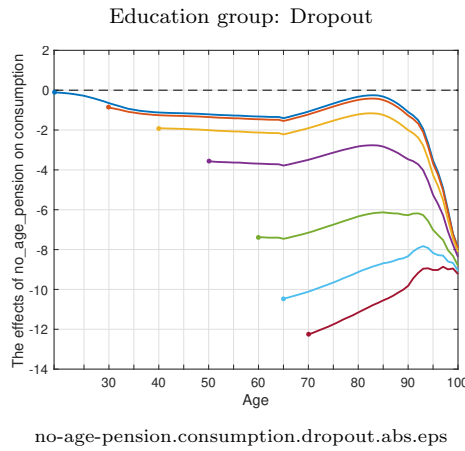
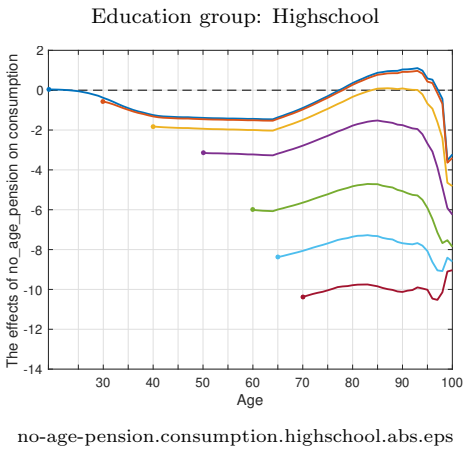
1.1.1 Policy change: Anticipated

Plotted differences: Absolute

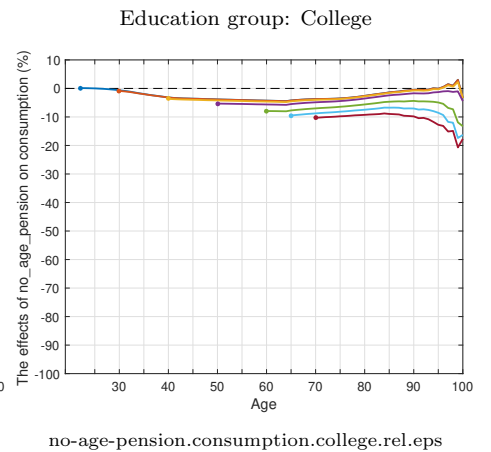
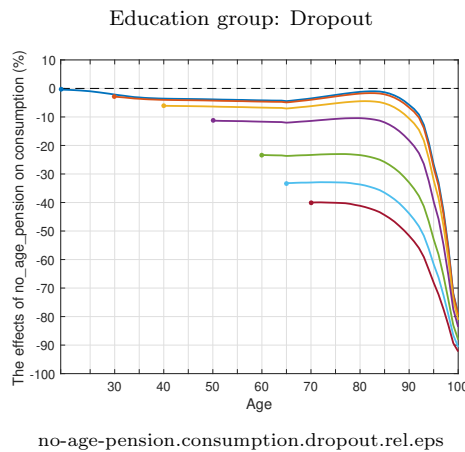
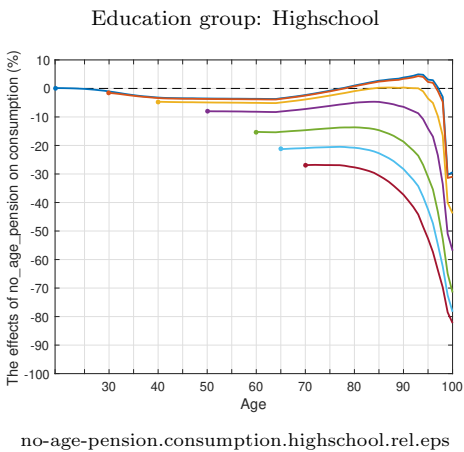


1.1.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



Plotted differences: Relative

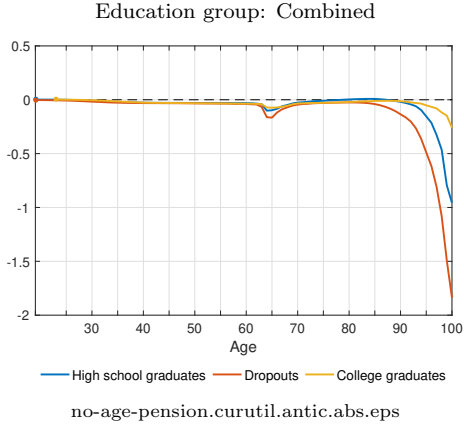


1.2 Simulated moment: Curutil

Note: Mean of current realized utility in by age plots. Discounted sum of realized utility in distribution plots.

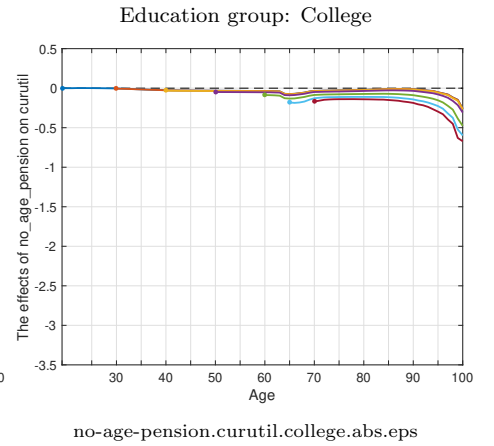
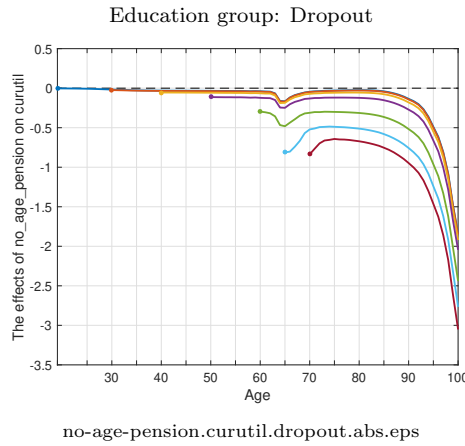
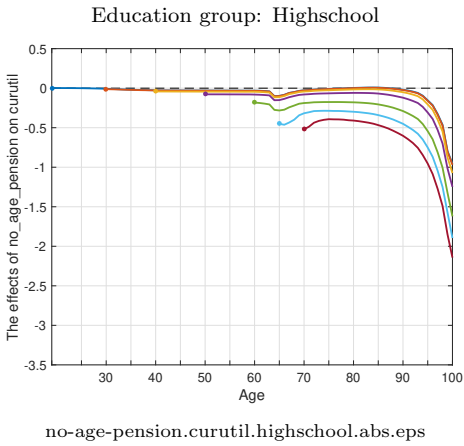
1.2.1 Policy change: Anticipated

Plotted differences: Absolute

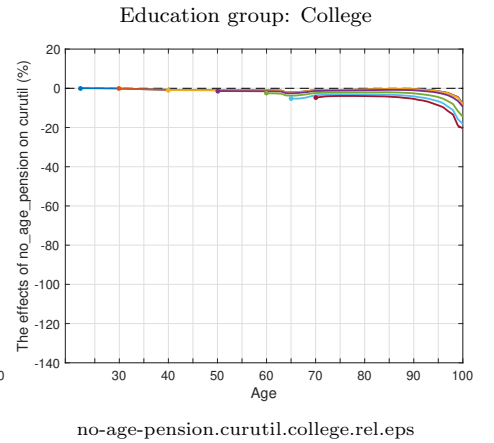
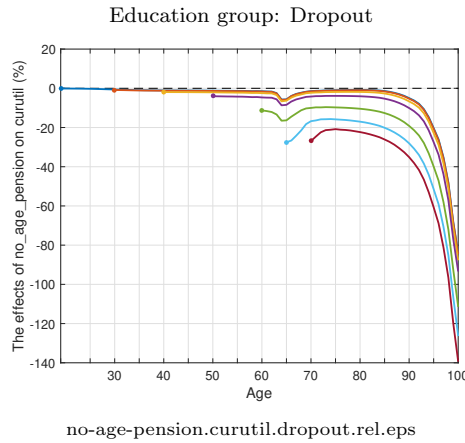
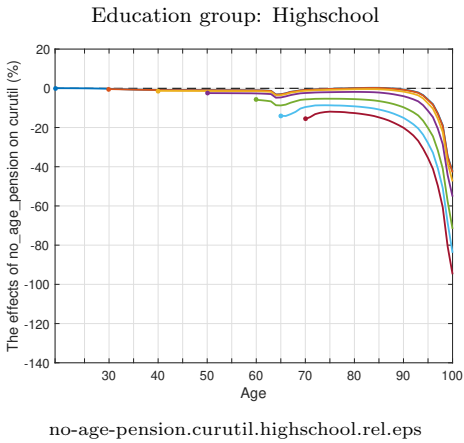


1.2.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



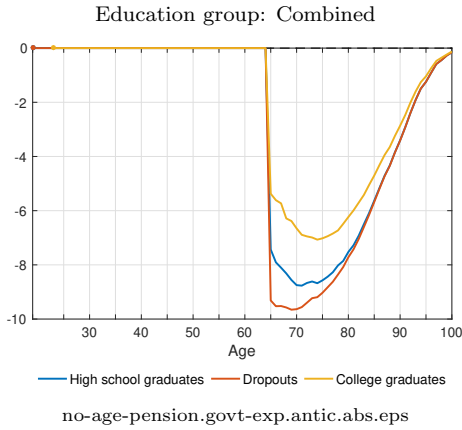
Plotted differences: Relative



1.3 Simulated moment: Govt-exp

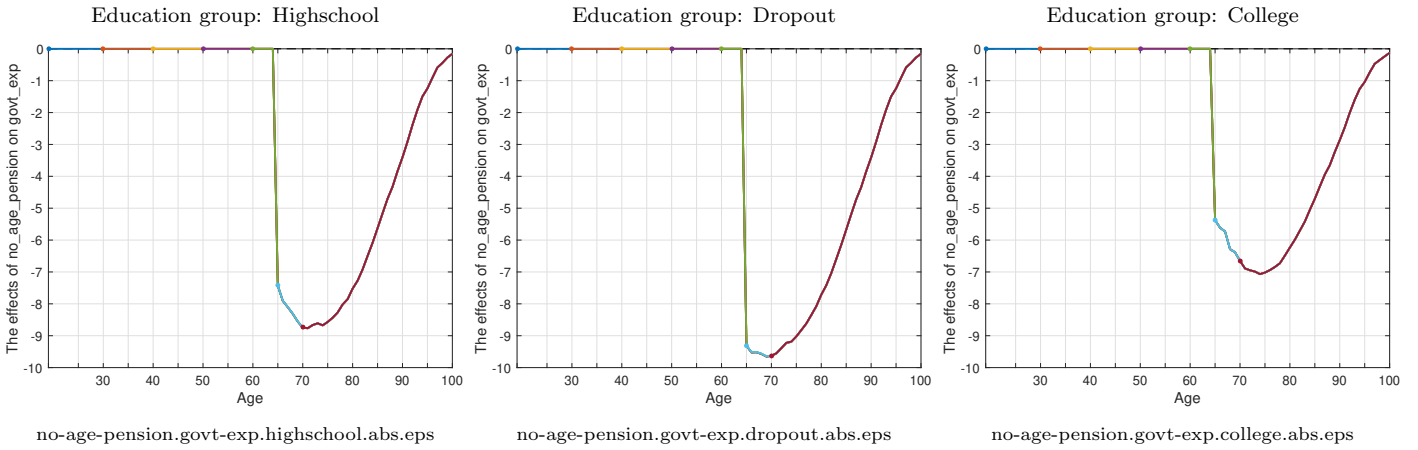
1.3.1 Policy change: Anticipated

Plotted differences: Absolute

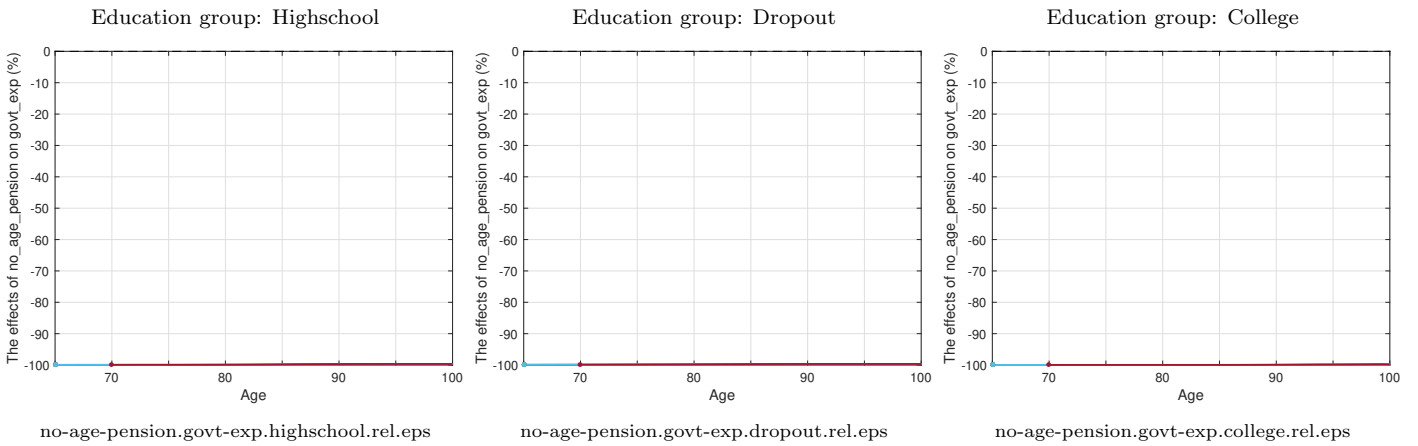


1.3.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



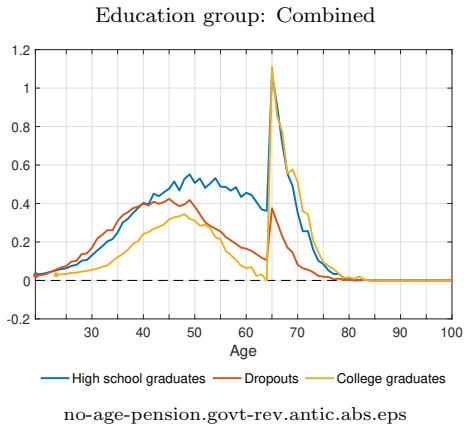
Plotted differences: Relative



1.4 Simulated moment: Govt-rev

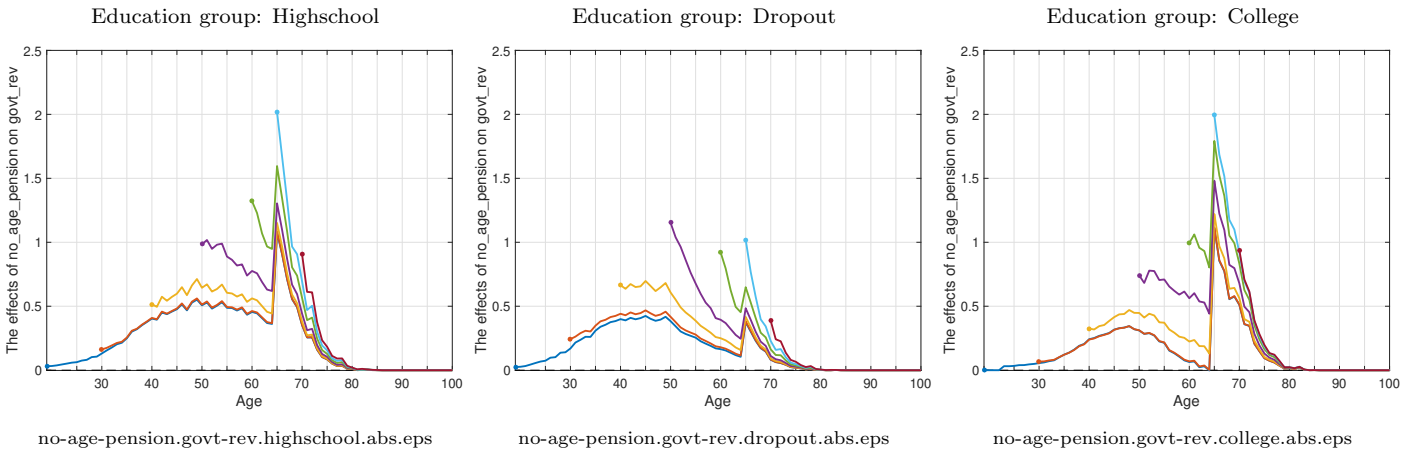
1.4.1 Policy change: Anticipated

Plotted differences: Absolute

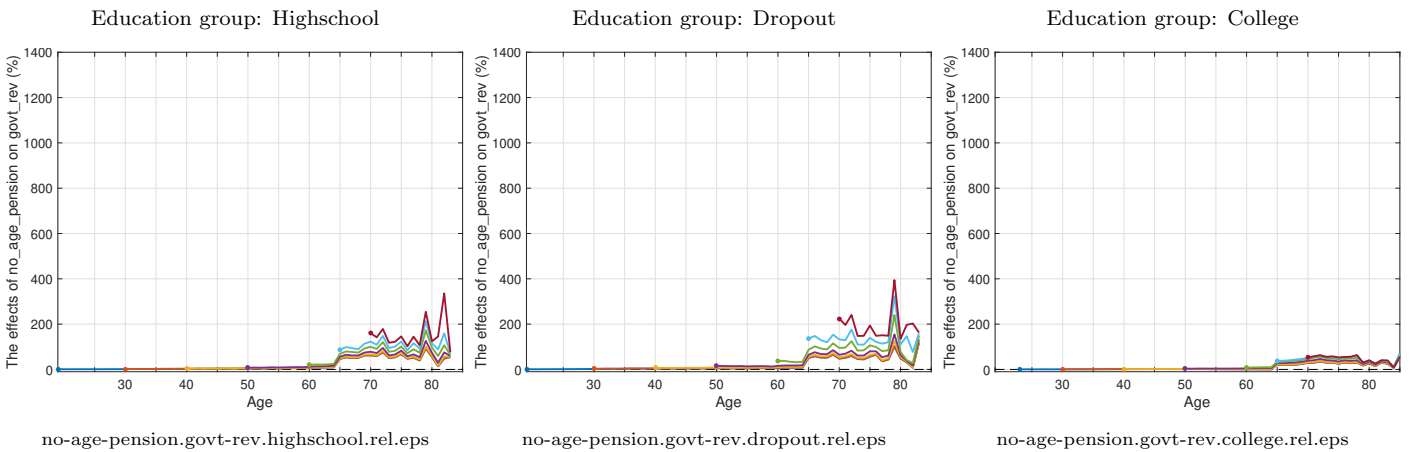


1.4.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



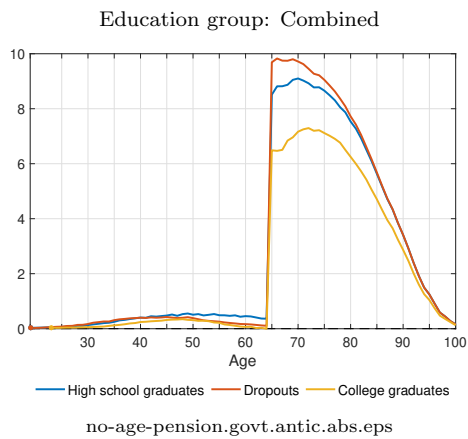
Plotted differences: Relative



1.5 Simulated moment: Govt

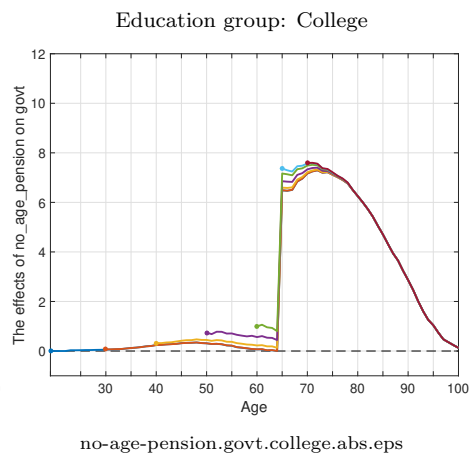
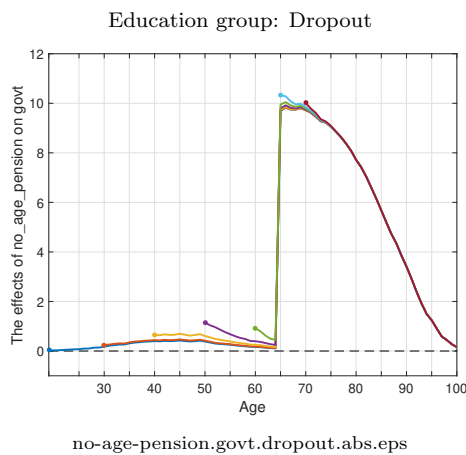
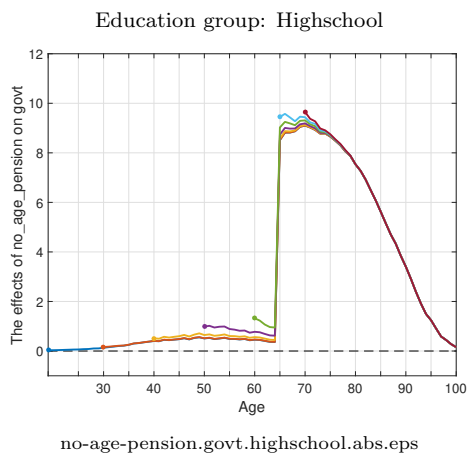
1.5.1 Policy change: Anticipated

Plotted differences: Absolute

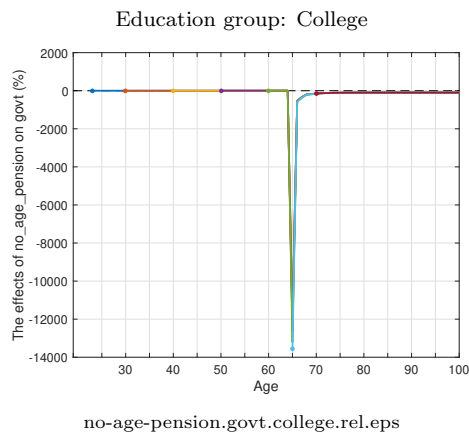
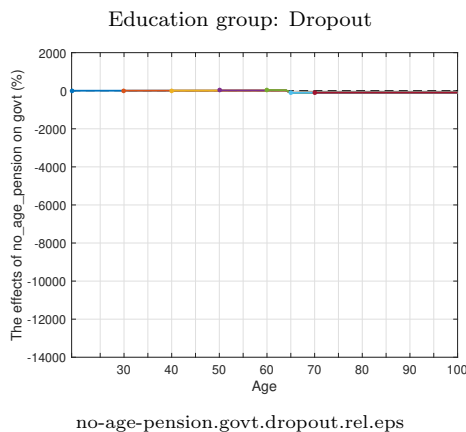
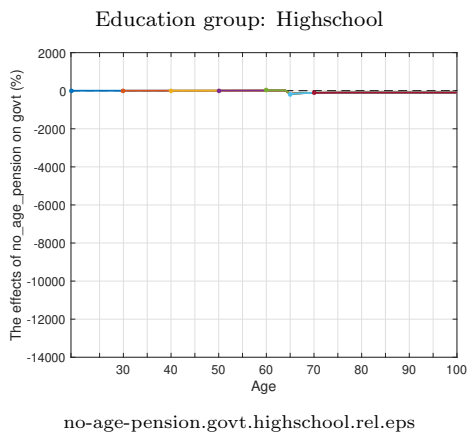


1.5.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



Plotted differences: Relative



1.6 Simulated moment: Hours-working

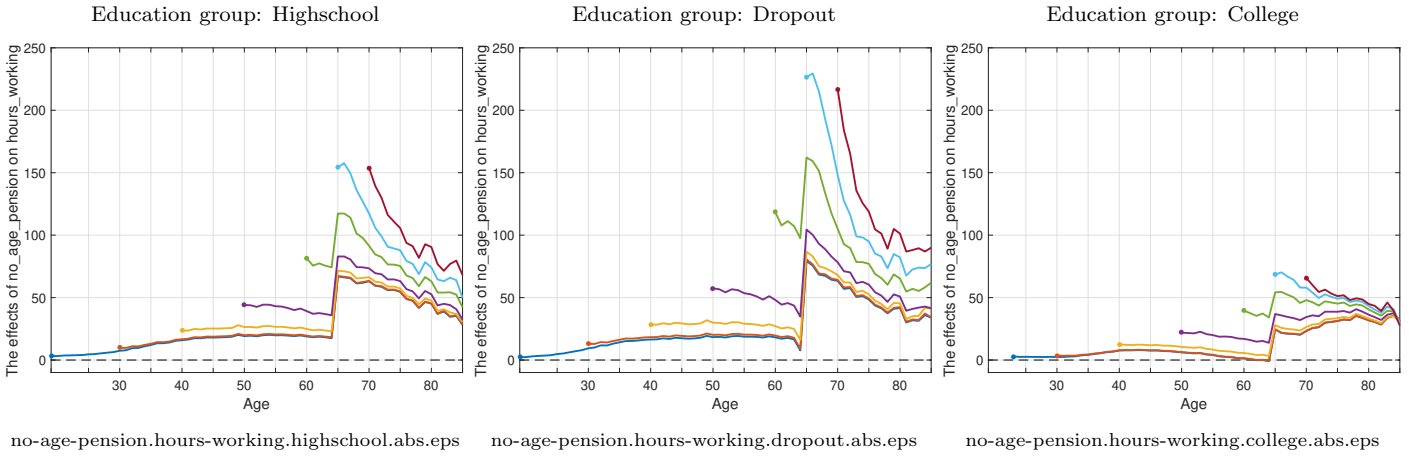
1.6.1 Policy change: Anticipated

Plotted differences: Absolute

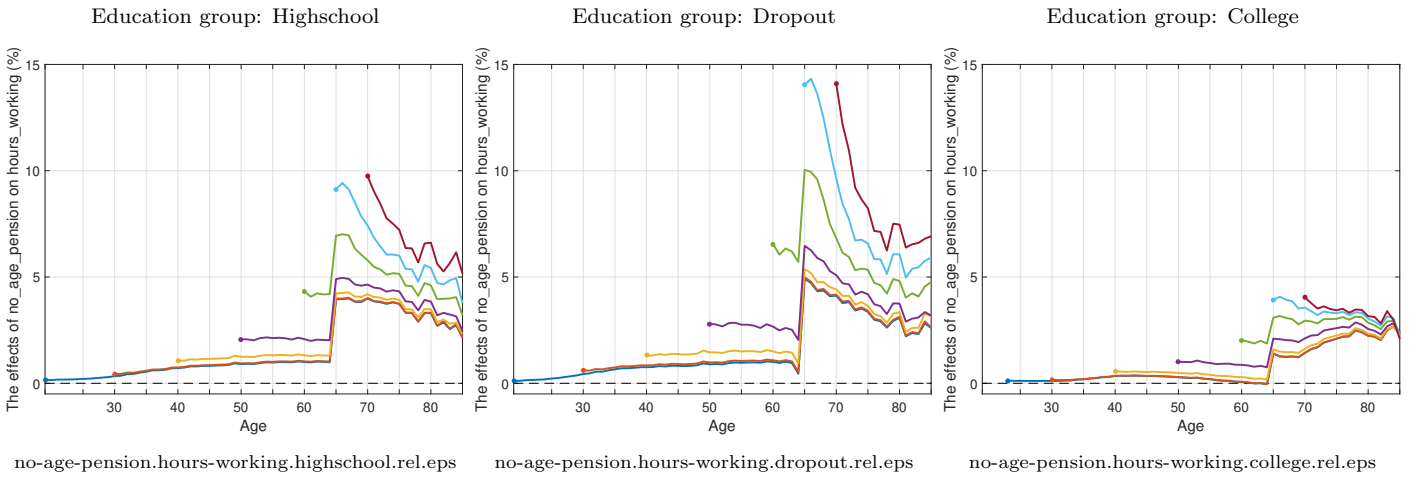


1.6.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



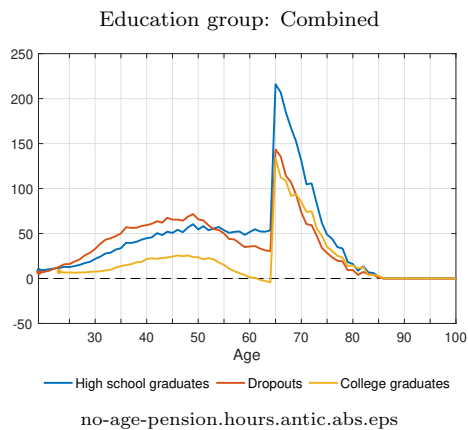
Plotted differences: Relative



1.7 Simulated moment: Hours

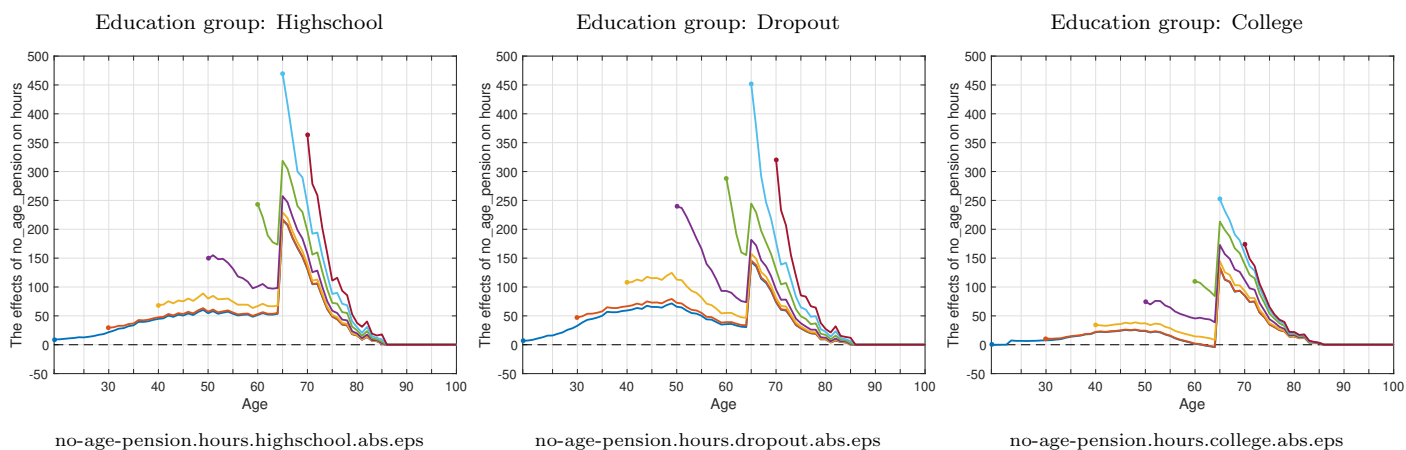
1.7.1 Policy change: Anticipated

Plotted differences: Absolute

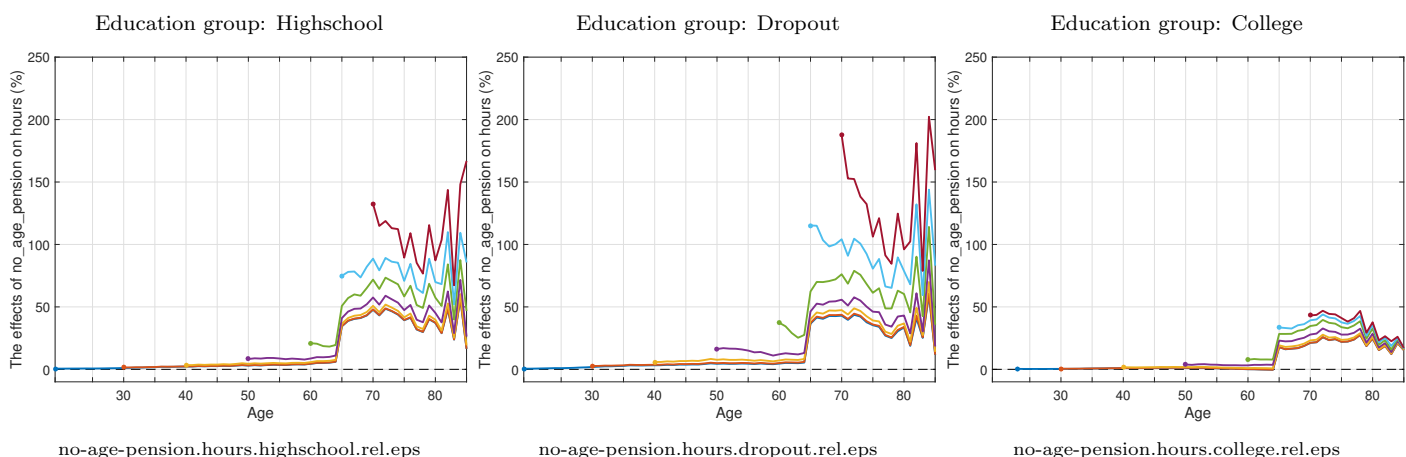


1.7.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



Plotted differences: Relative



1.8 Simulated moment: Wealth0

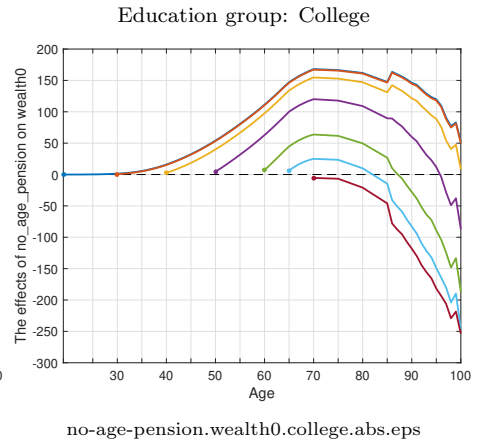
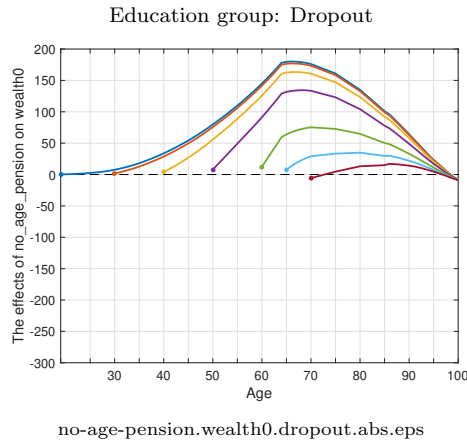
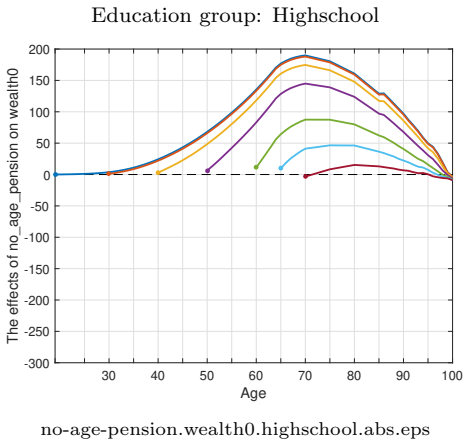
1.8.1 Policy change: Anticipated

Plotted differences: Absolute

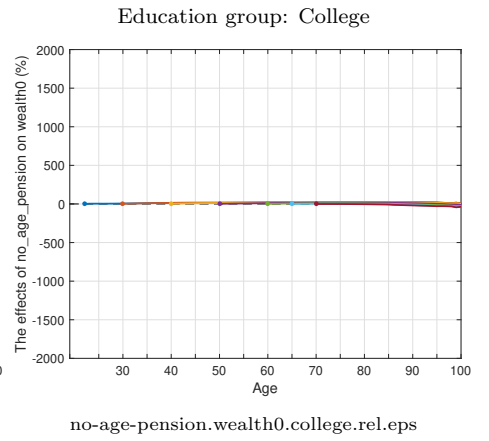
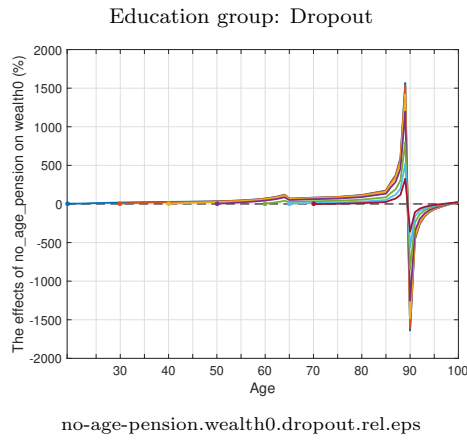
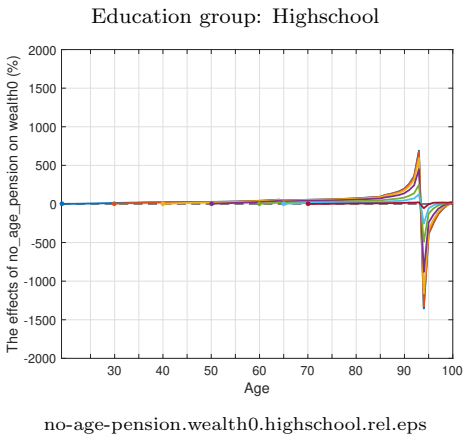


1.8.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



Plotted differences: Relative

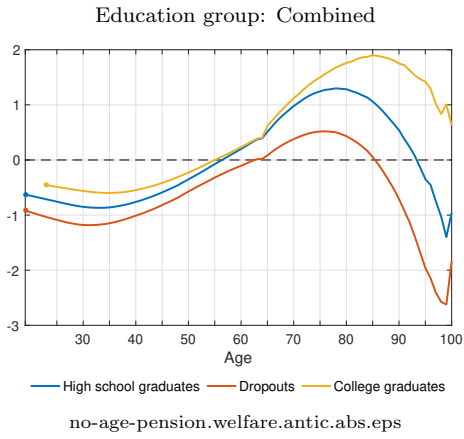


1.9 Simulated moment: Welfare

Note: Mean of value function at simulated points in by age plots. Expected lifetime utility at initial age in distribution plots.

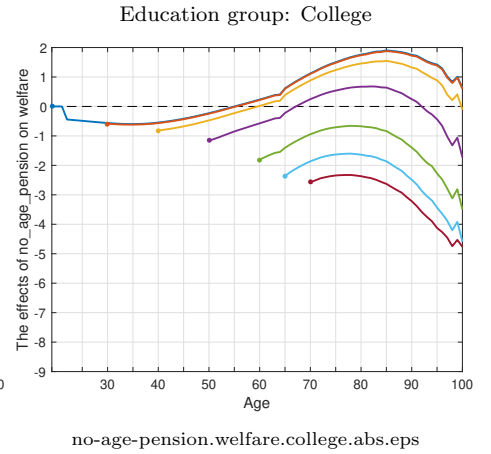
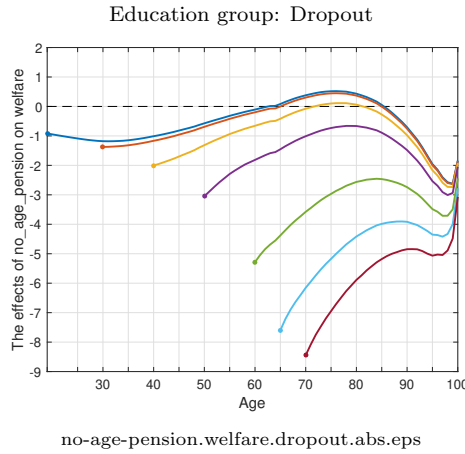
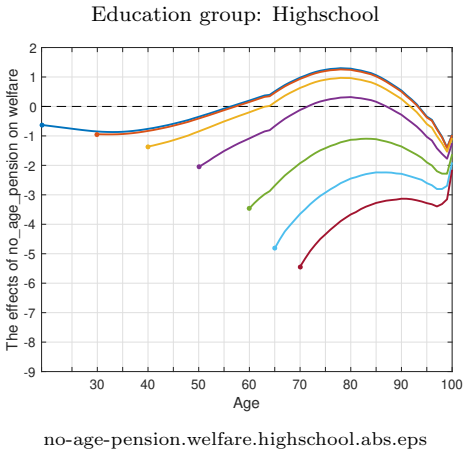
1.9.1 Policy change: Anticipated

Plotted differences: Absolute

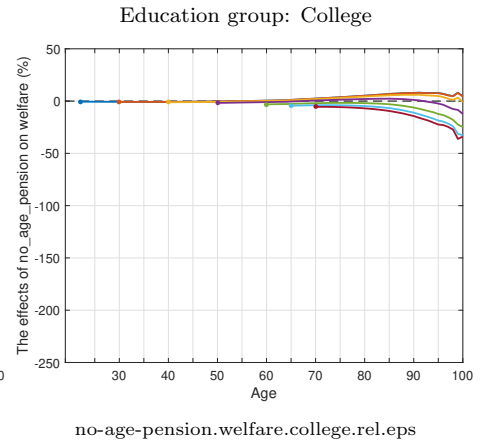
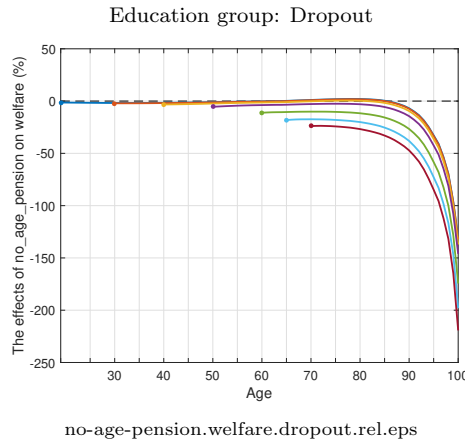
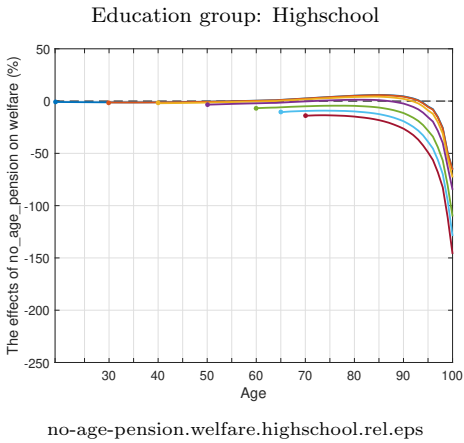


1.9.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



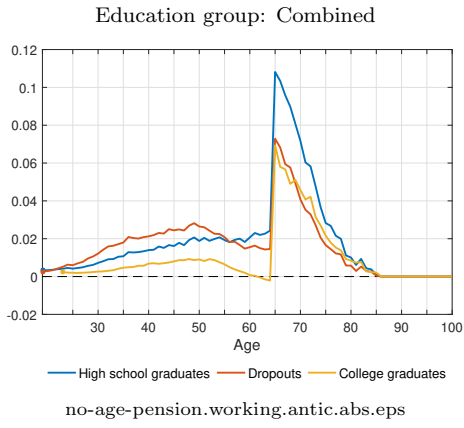
Plotted differences: Relative



1.10 Simulated moment: Working

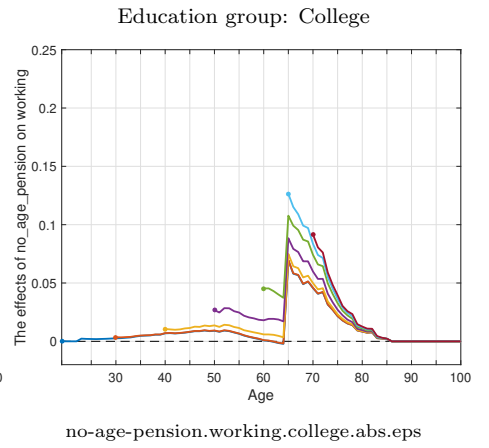
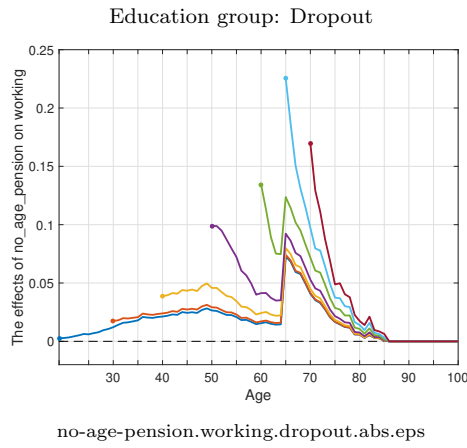
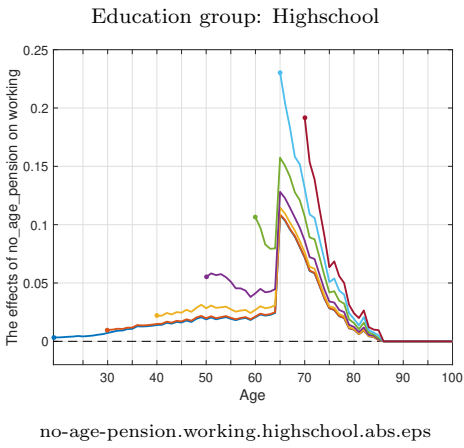
1.10.1 Policy change: Anticipated

Plotted differences: Absolute

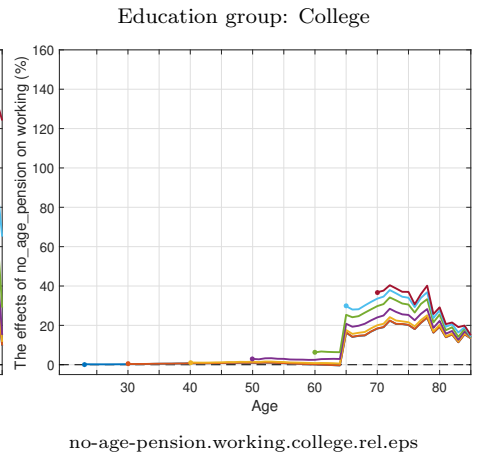
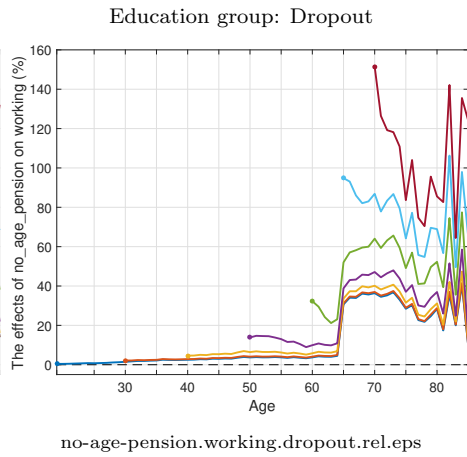
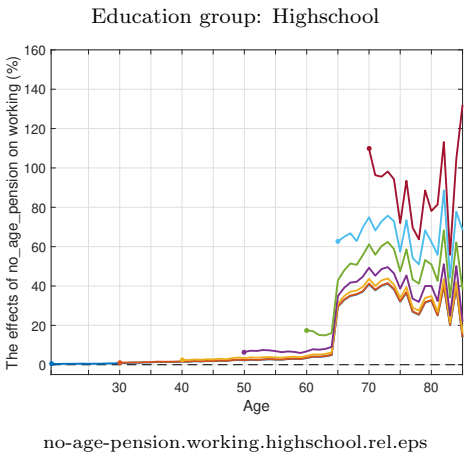


1.10.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



Plotted differences: Relative



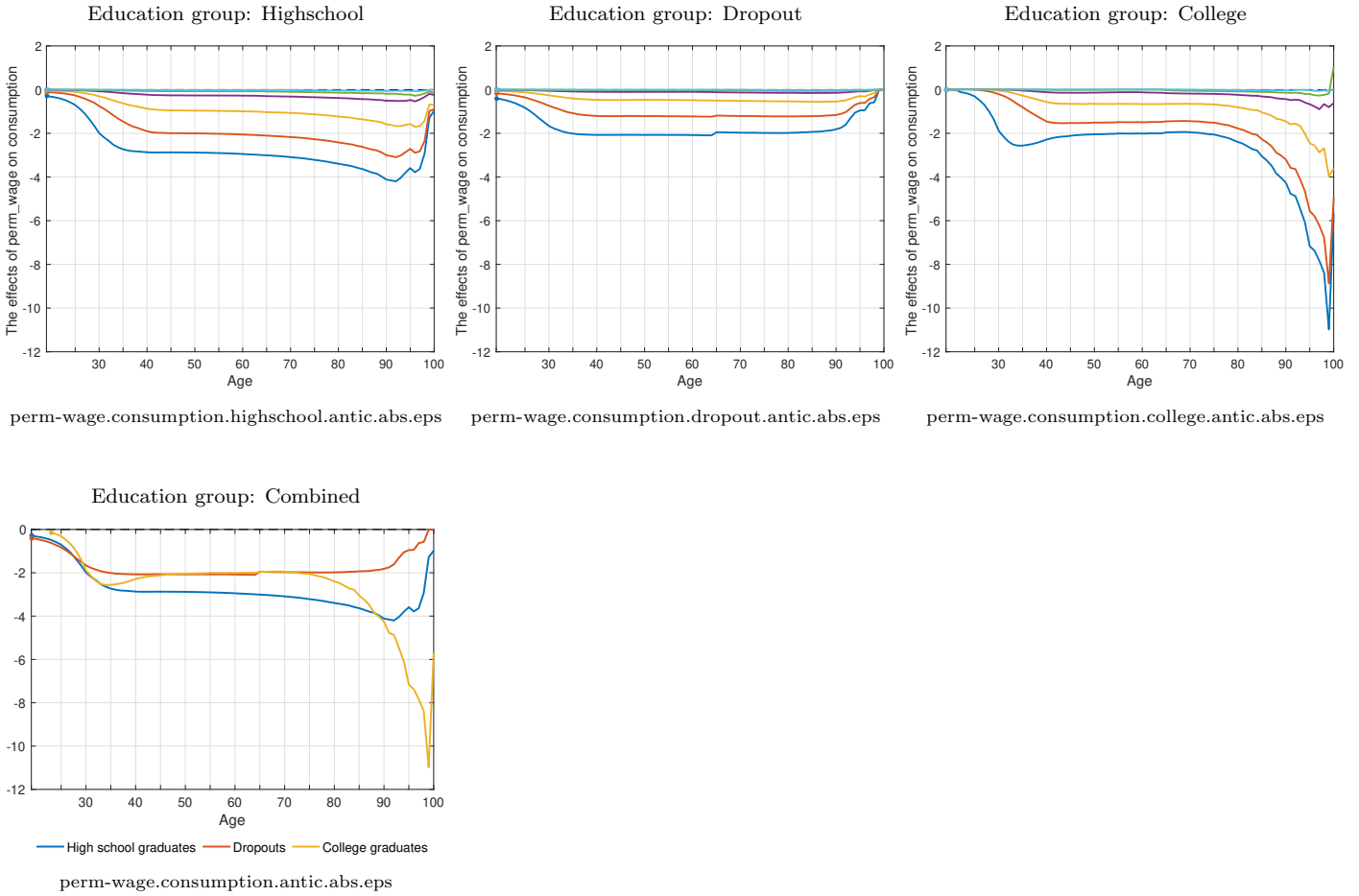
2 Policy: Perm wage

Permanent wage reduction (-10%)

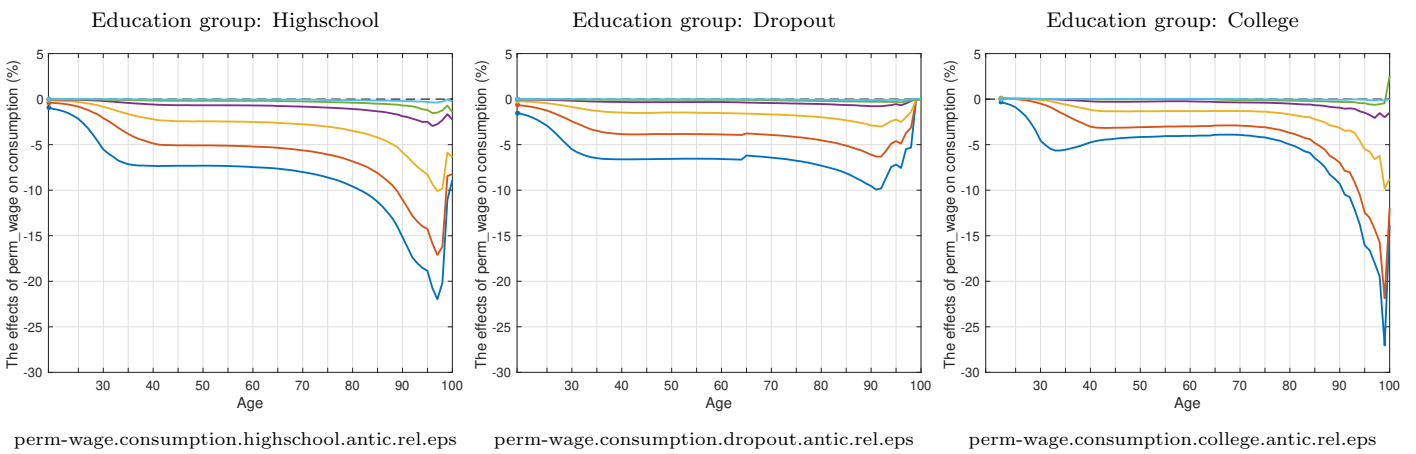
2.1 Simulated moment: Consumption

2.1.1 Policy change: Anticipated

Plotted differences: Absolute

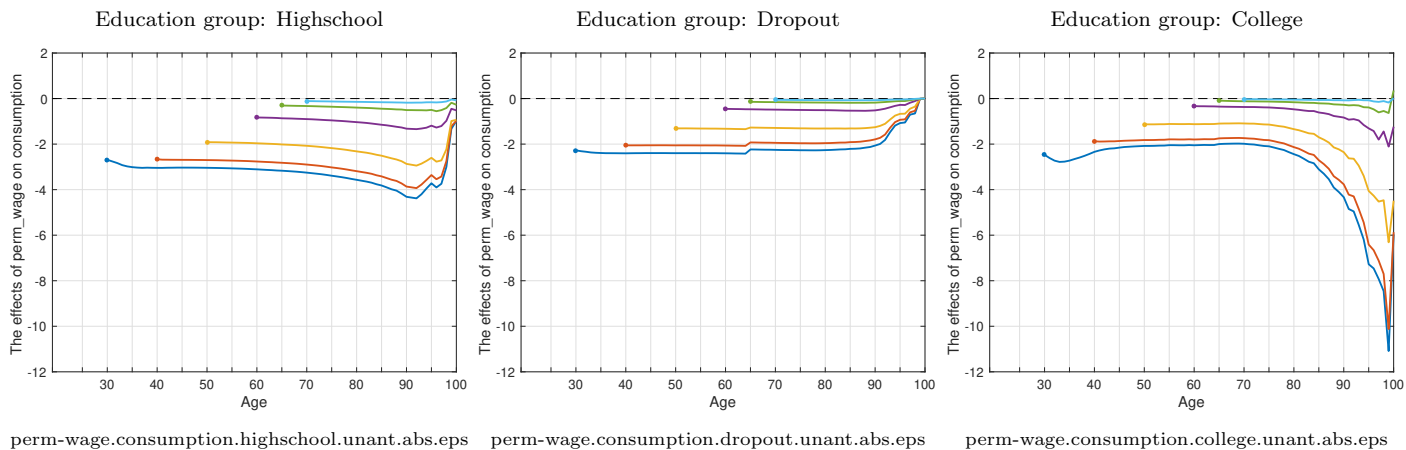


Plotted differences: Relative

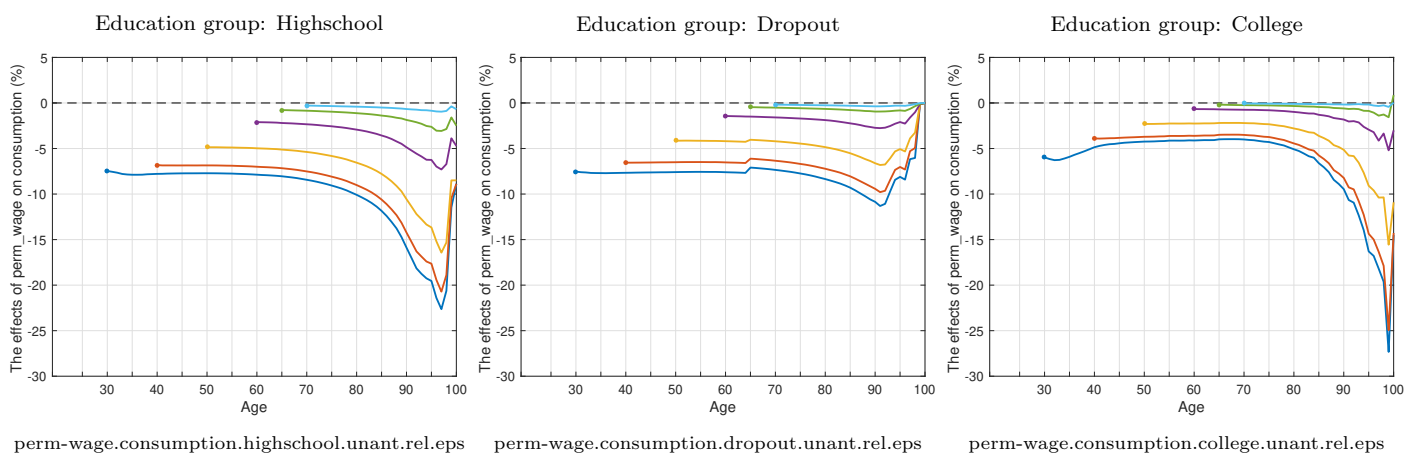


2.1.2 Policy change: Unanticipated

Plotted differences: Absolute



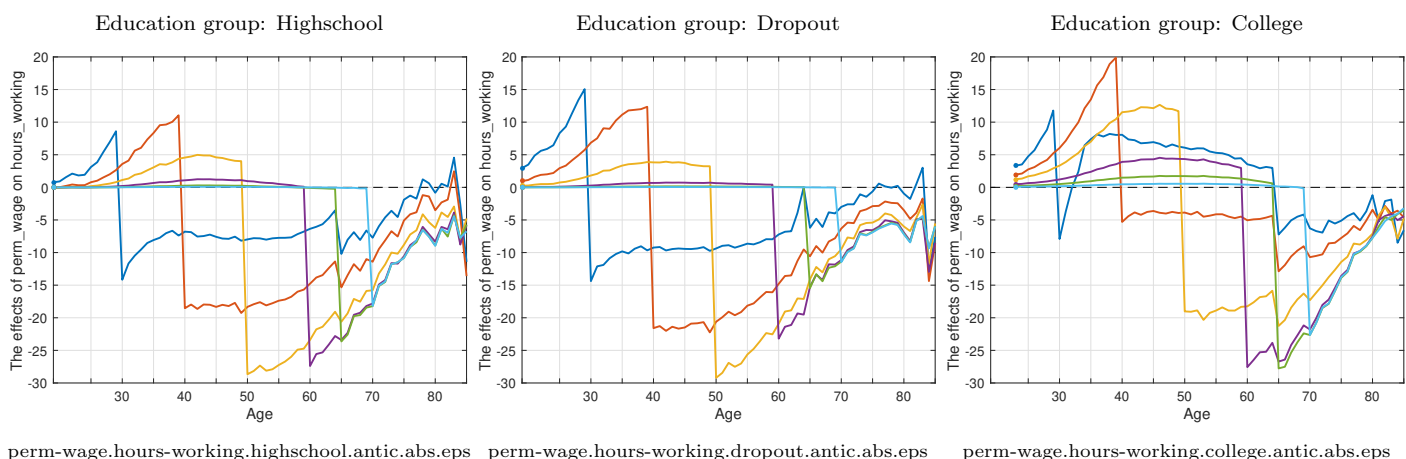
Plotted differences: Relative



2.2 Simulated moment: Hours-working

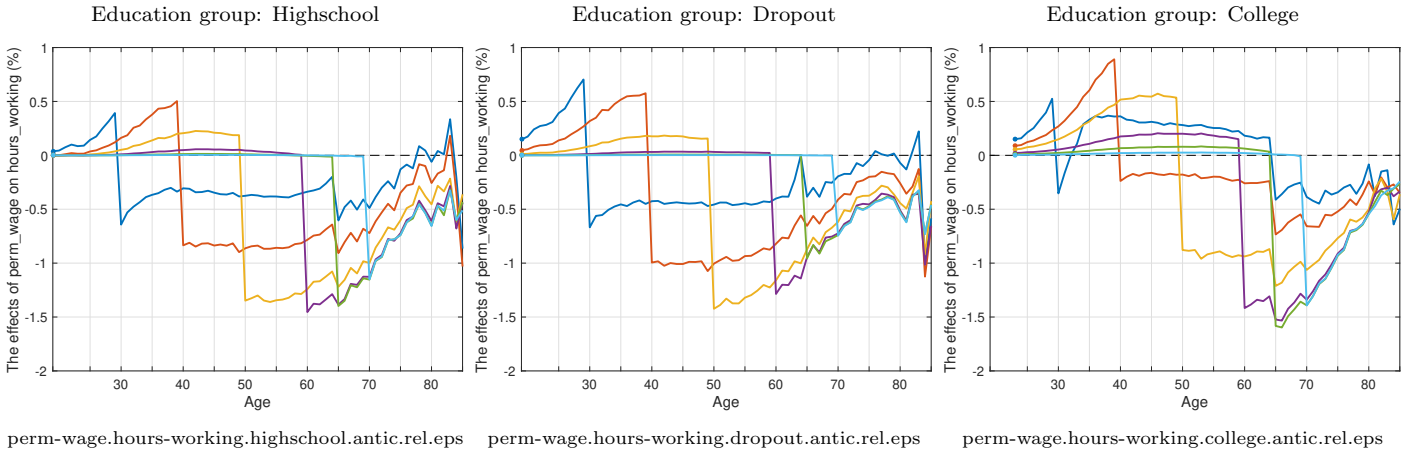
2.2.1 Policy change: Anticipated

Plotted differences: Absolute



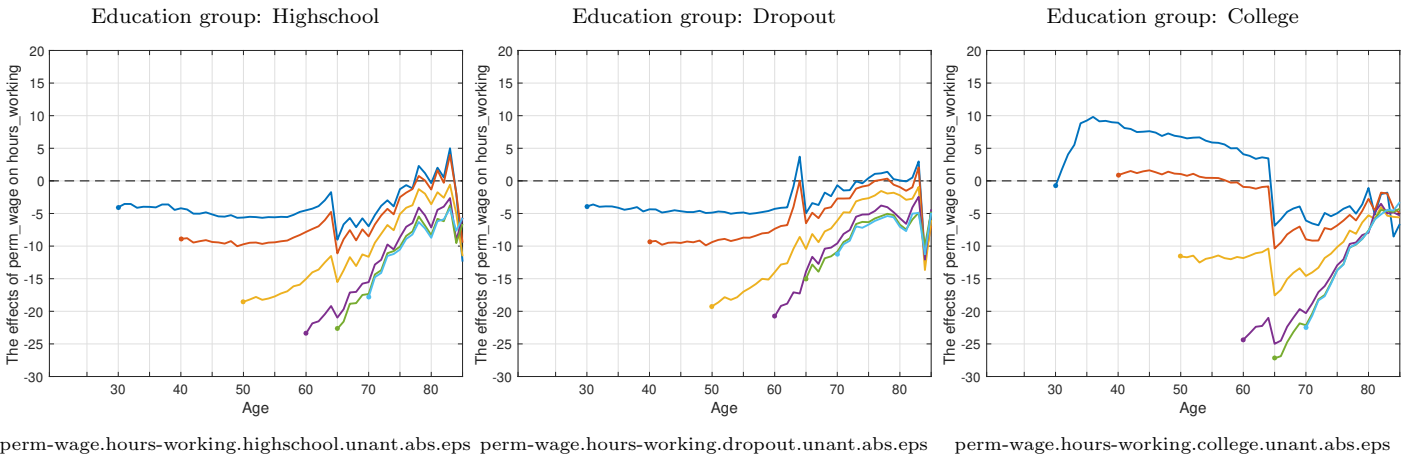


Plotted differences: Relative

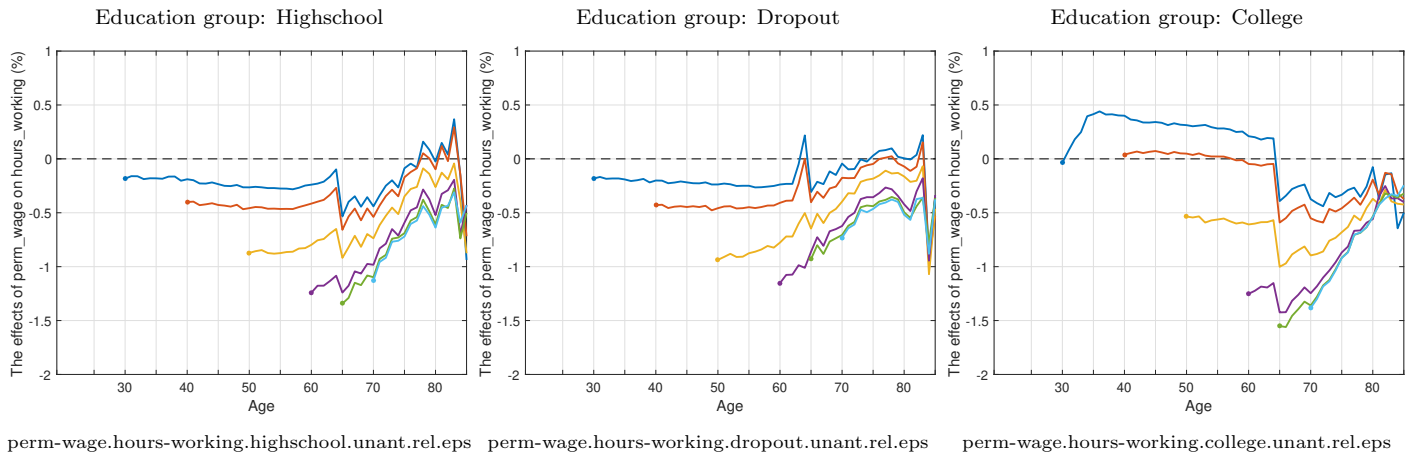


2.2.2 Policy change: Unanticipated

Plotted differences: Absolute



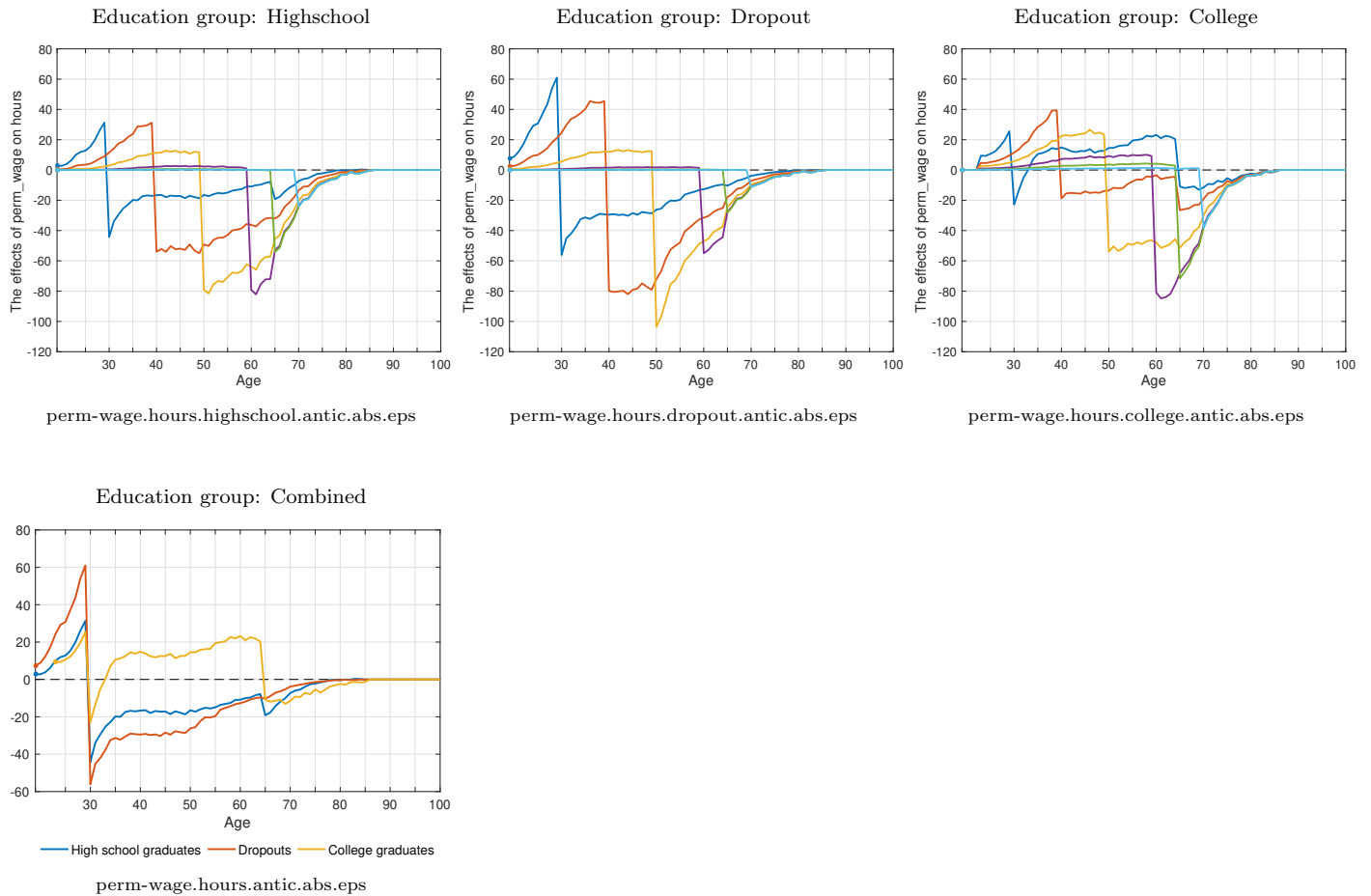
Plotted differences: Relative



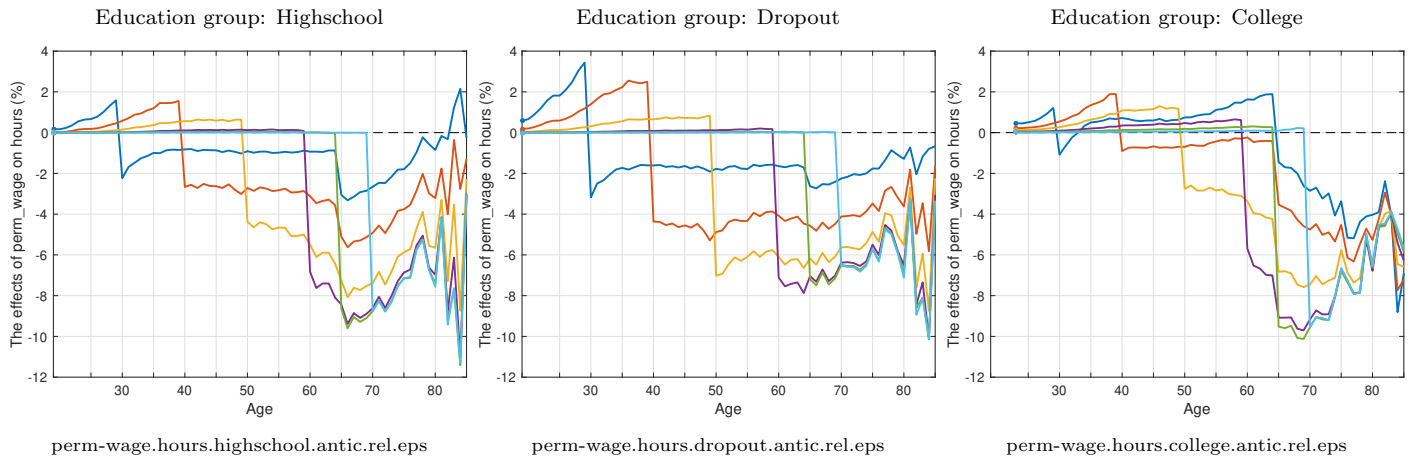
2.3 Simulated moment: Hours

2.3.1 Policy change: Anticipated

Plotted differences: Absolute

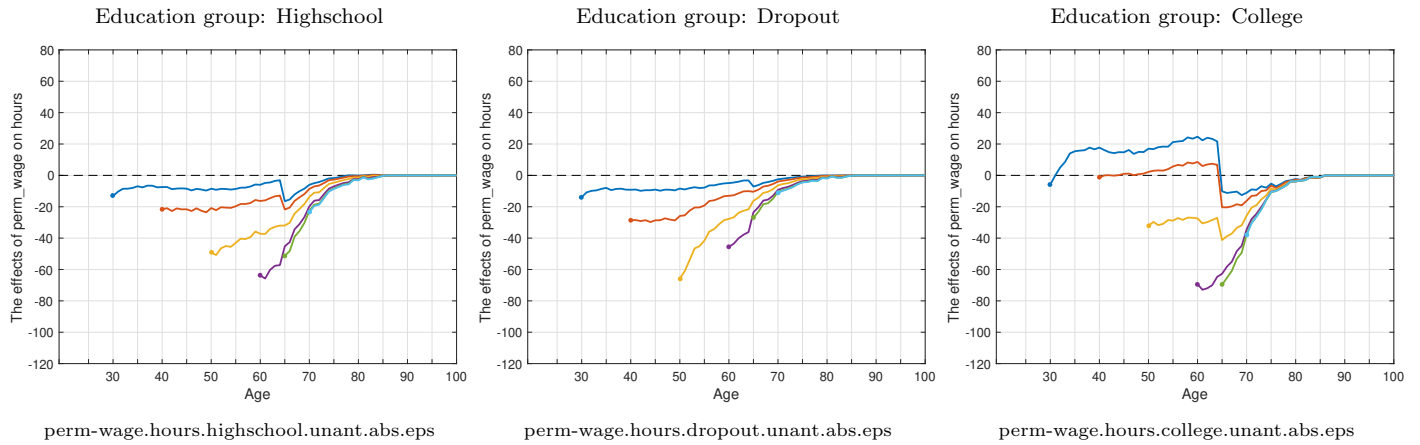


Plotted differences: Relative

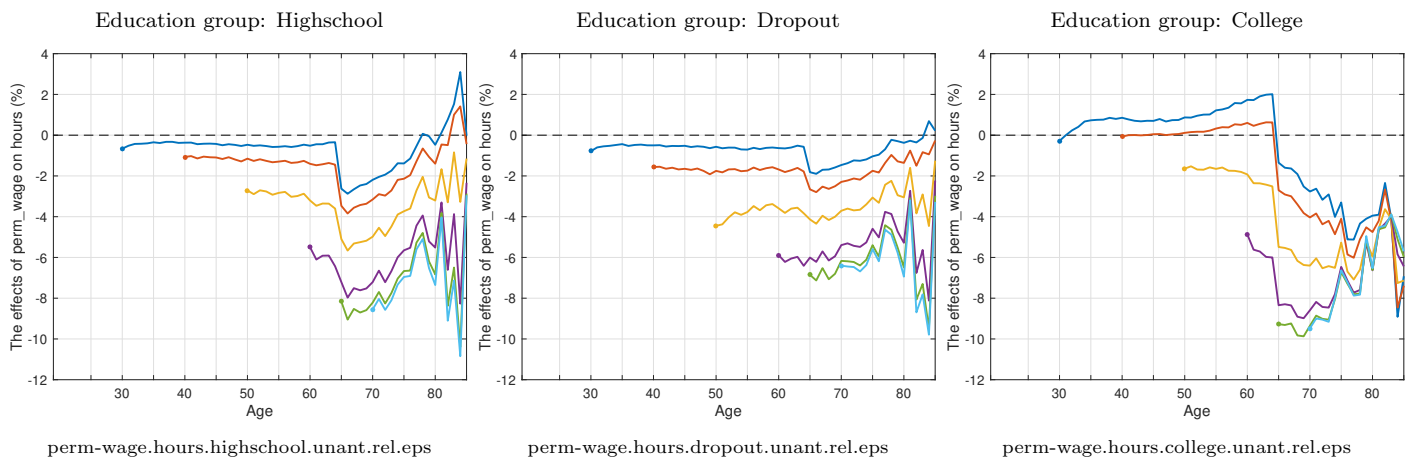


2.3.2 Policy change: Unanticipated

Plotted differences: Absolute



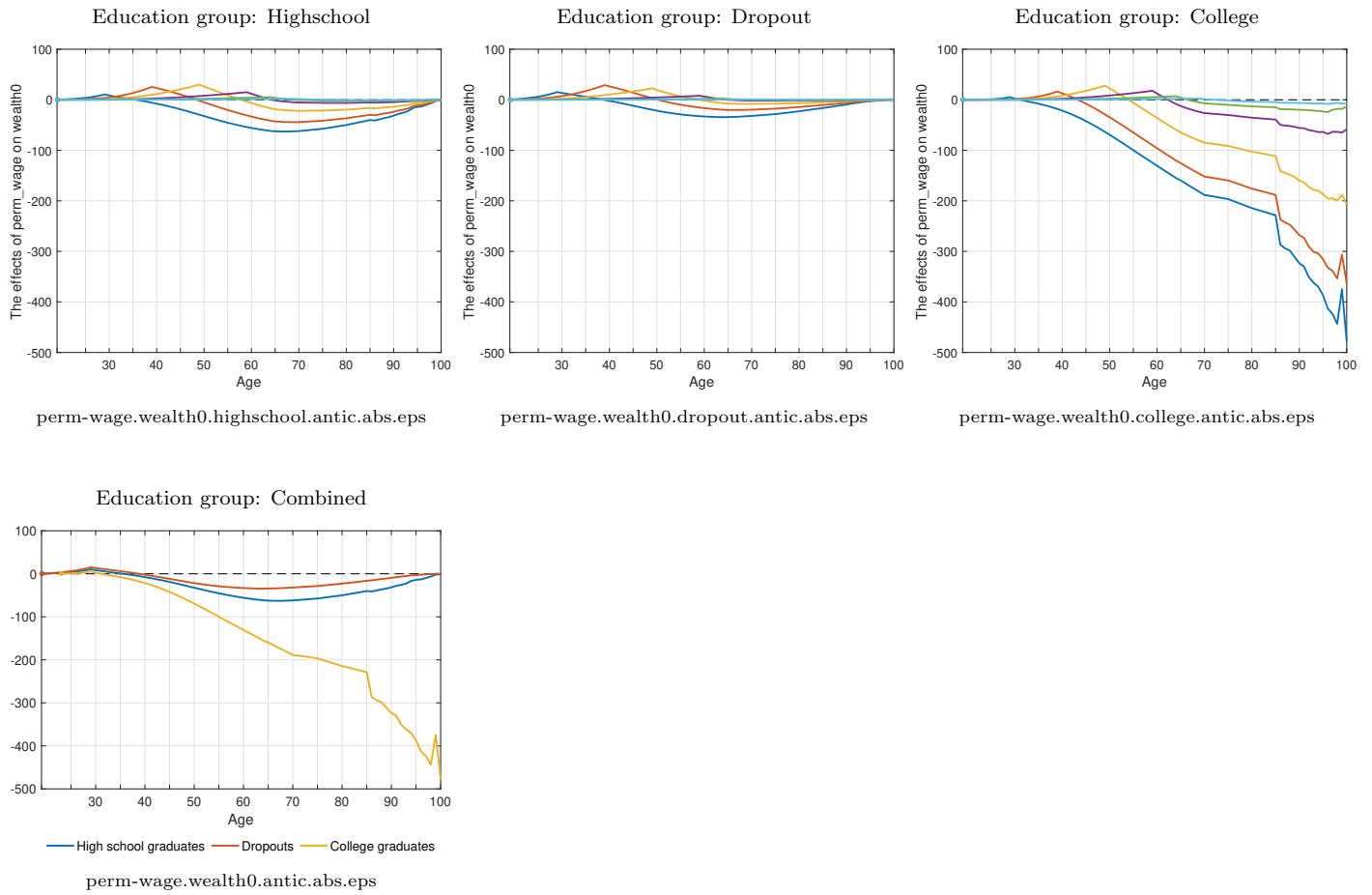
Plotted differences: Relative



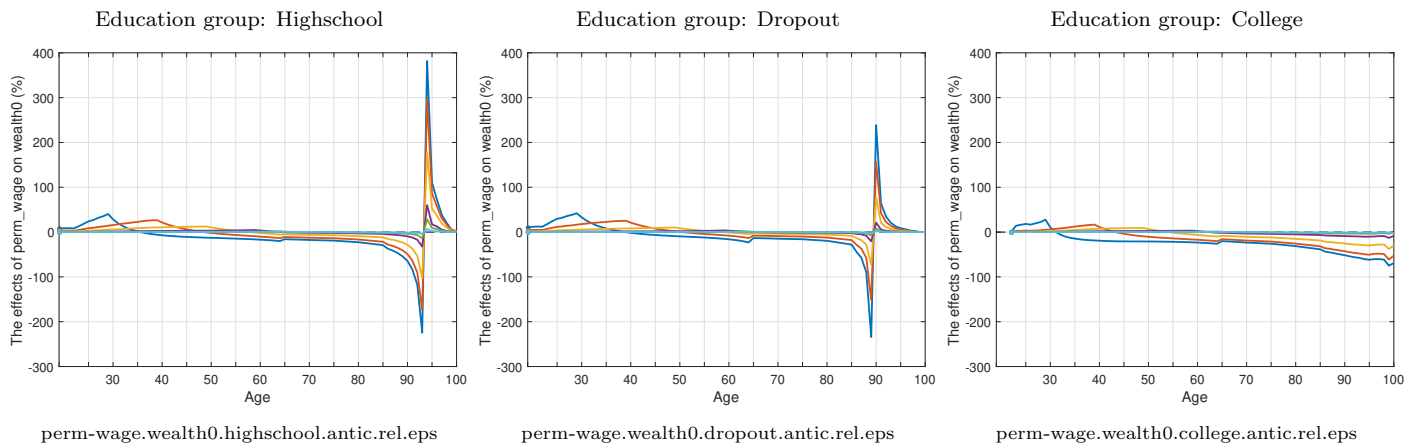
2.4 Simulated moment: Wealth0

2.4.1 Policy change: Anticipated

Plotted differences: Absolute

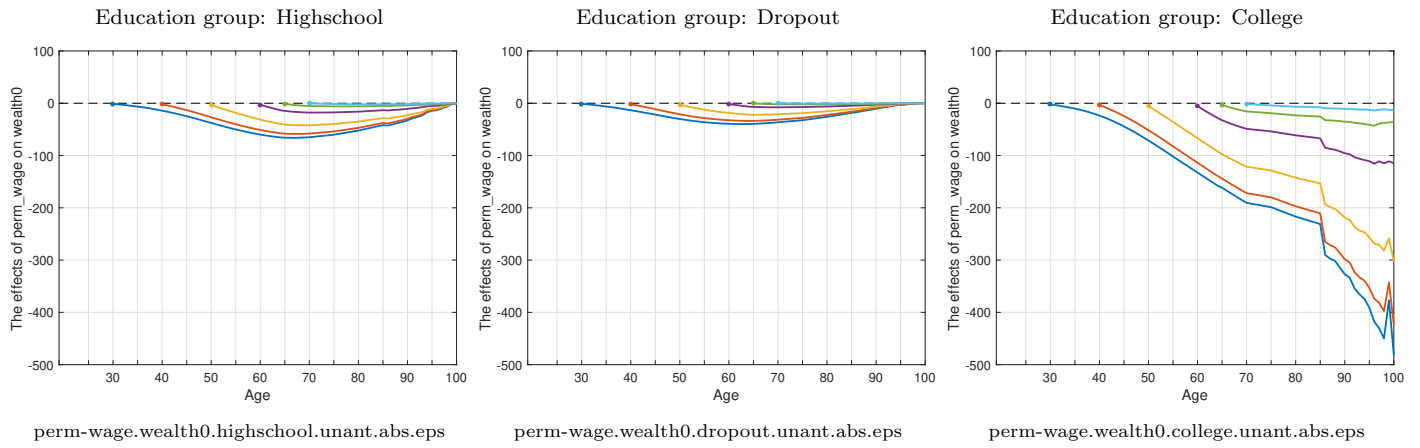


Plotted differences: Relative

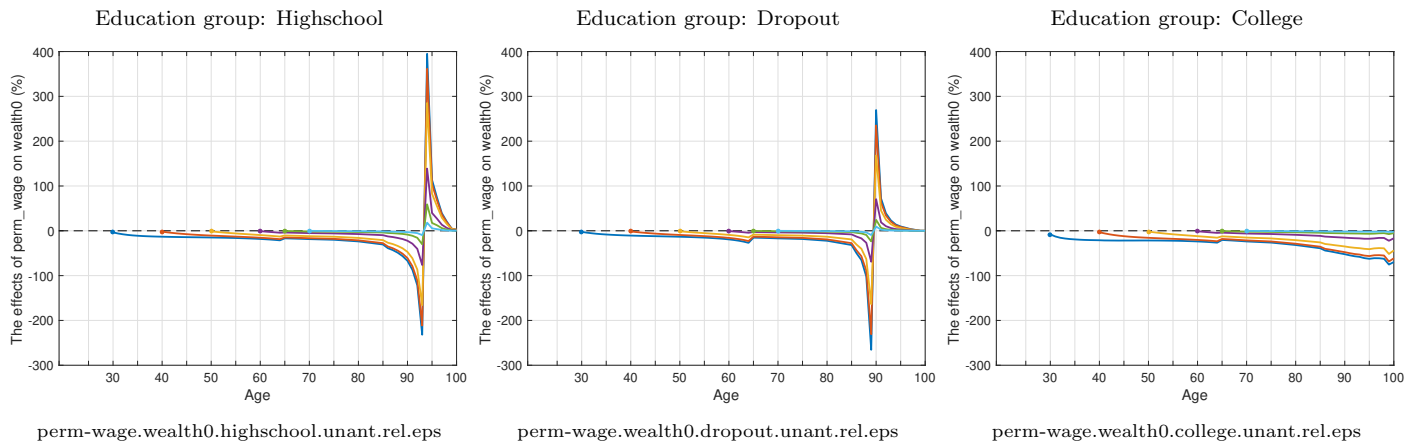


2.4.2 Policy change: Unanticipated

Plotted differences: Absolute



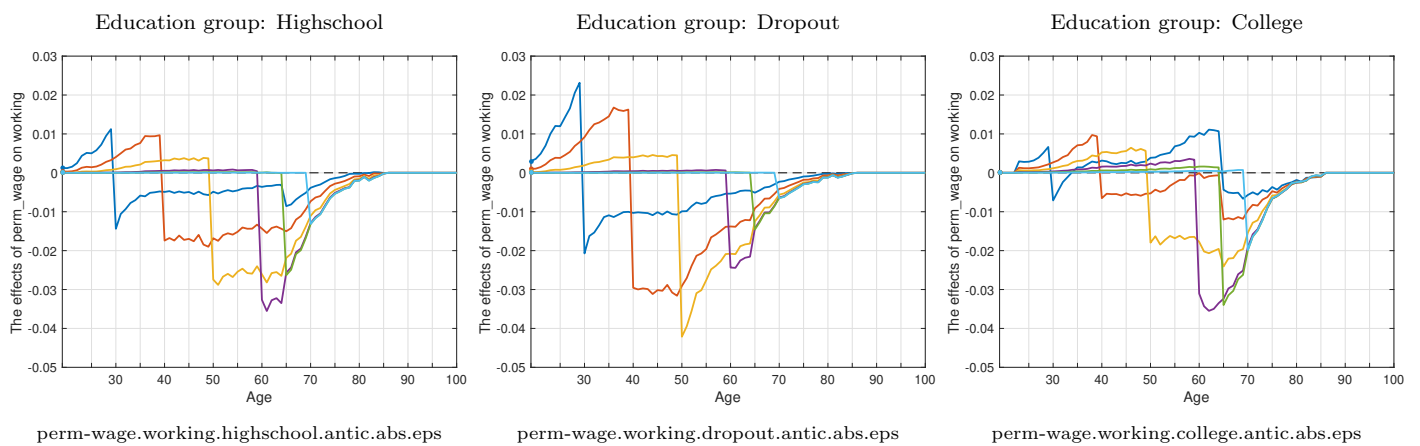
Plotted differences: Relative

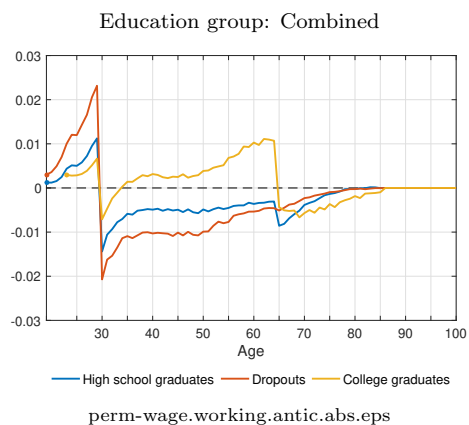


2.5 Simulated moment: Working

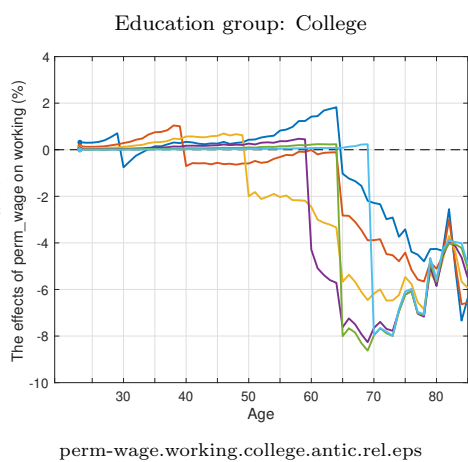
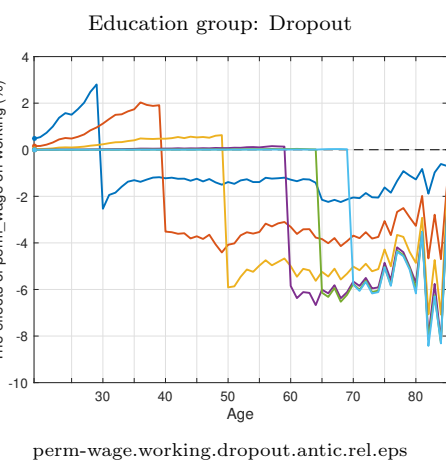
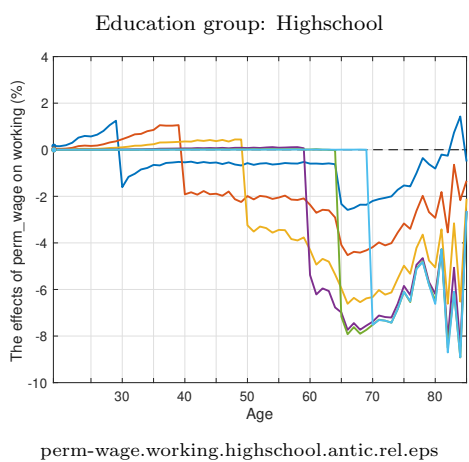
2.5.1 Policy change: Anticipated

Plotted differences: Absolute



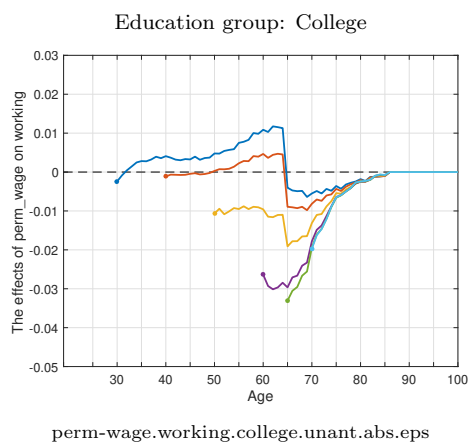
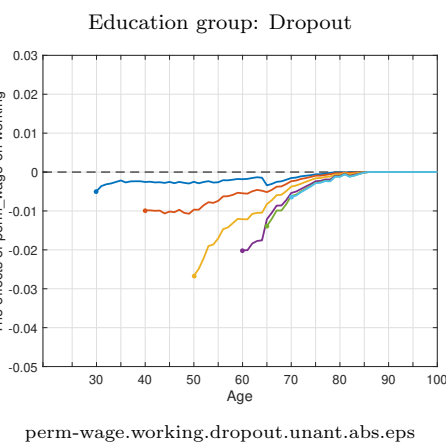
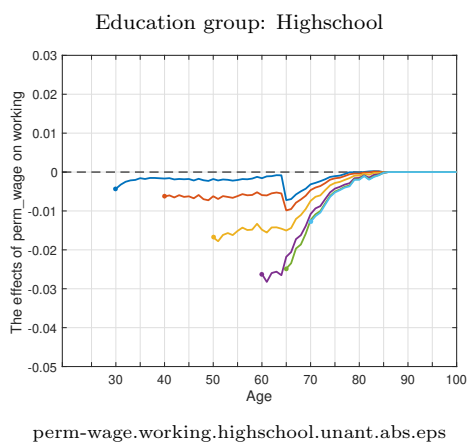


Plotted differences: Relative

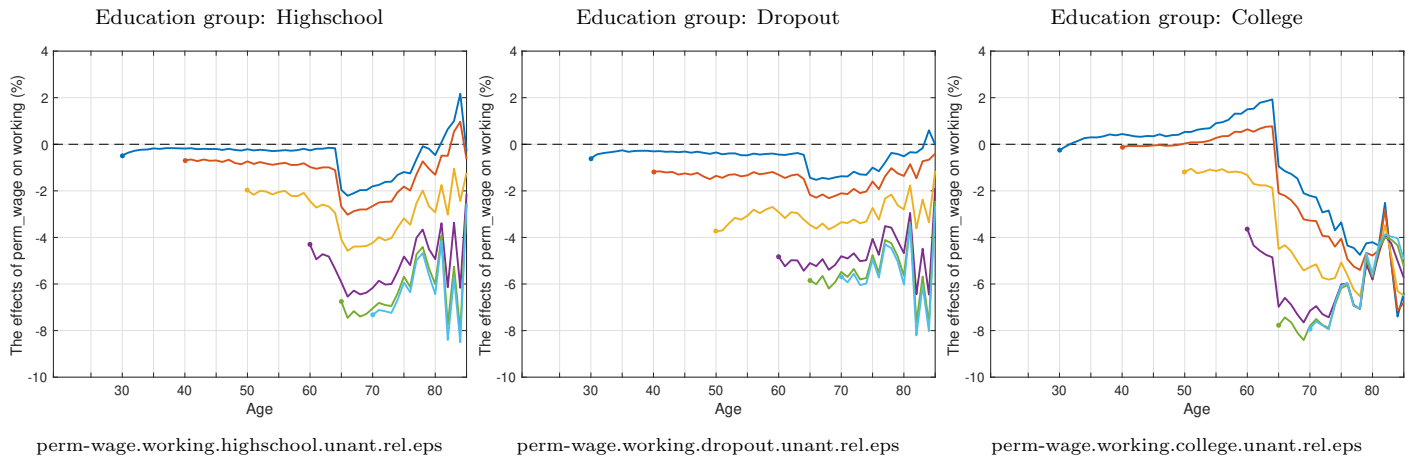


2.5.2 Policy change: Unanticipated

Plotted differences: Absolute



Plotted differences: Relative



3 Policy: Revneutral

Note: Revenue neutral calibration is performed in the following way. Policy parameters are set to implement a combination of policies. The model is solved. Initial conditions for the simulation are set for $nsim = 1000$ individuals of each education and type: altogether $6 * nsims$ simulated lifecycles which share 6 identical sets of idiosyncratic shocks. The unobserved types are integrated over when education specific moments are computed.

The policy simulations are done in the usual way to produce both anticipated and unanticipated effects at given policy change revelation ages. Along with the usual moments, government revenue and expenditure is also simulated for each of the 6 groups of individuals, and weighted by unobserved type membership probabilities to result in education specific values for each revelation age.

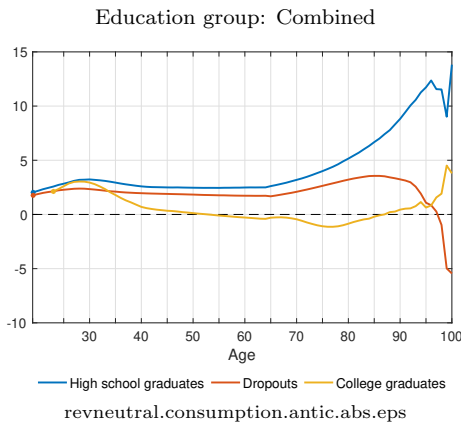
The computed scalar measure of government deficit/surplus is loosely based on the OLG framework using the observed structure of the population. Namely, the observed counts in each education by age cell are aggregated to represent the given set of revelation ages by education (as if population only consisted of cohorts at given revelation ages). The constructed discrete distribution is then converted into weights, which are applied to the simulated budget deficit/surplus. Simple summation is then used over all ages in the simulated lifecycles.

To calibrate RN policies, the anticipated variant of the aggregated measure is brought below a tolerance level (\$100 per capita annually) by moving the parameter of one of the policy.

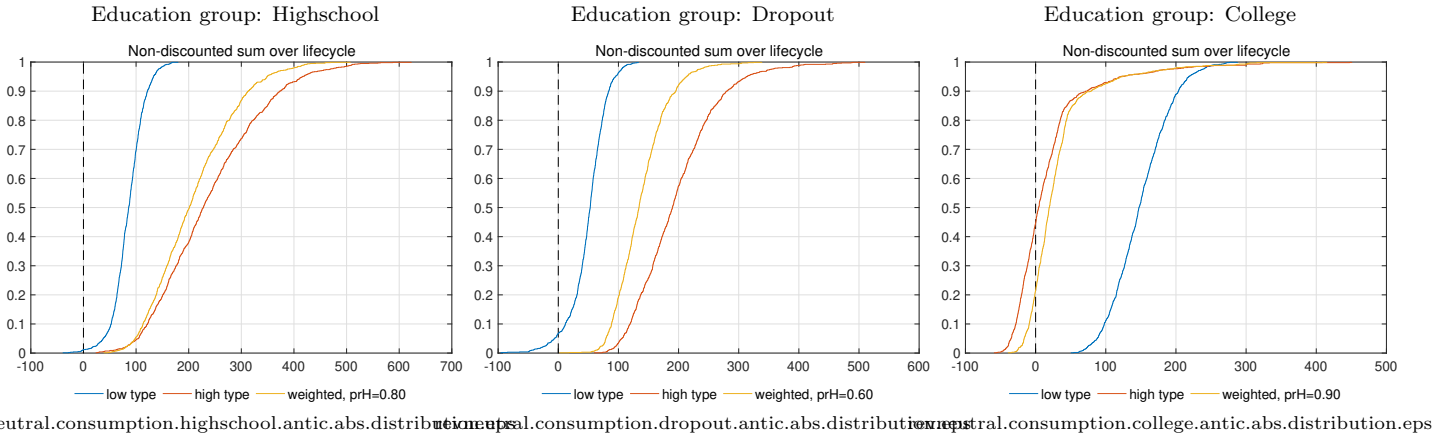
3.1 Simulated moment: Consumption

3.1.1 Policy change: Anticipated

Plotted differences: Absolute

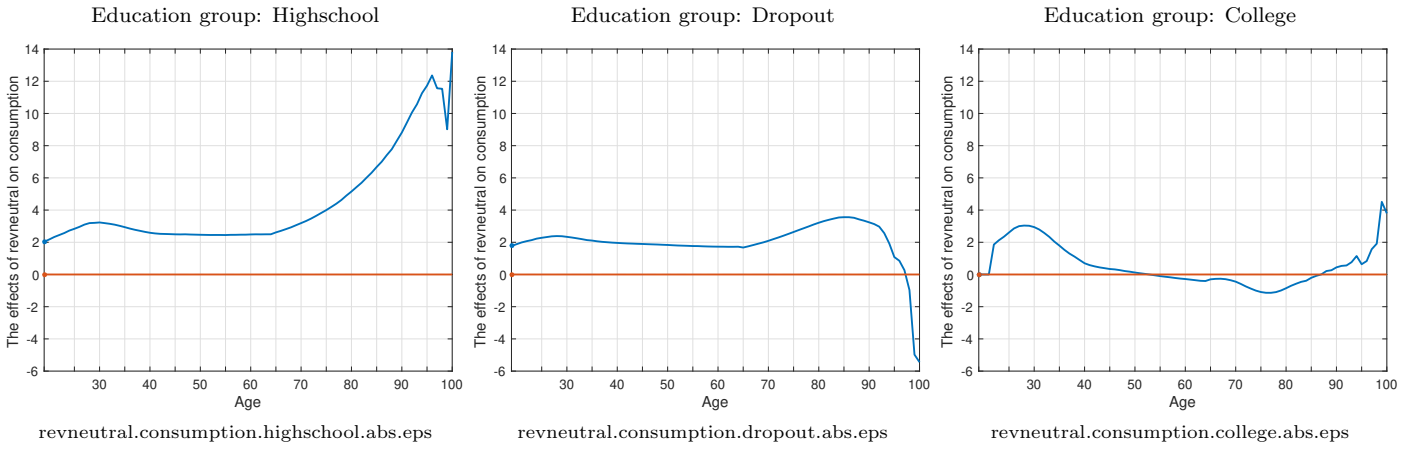


Distribution

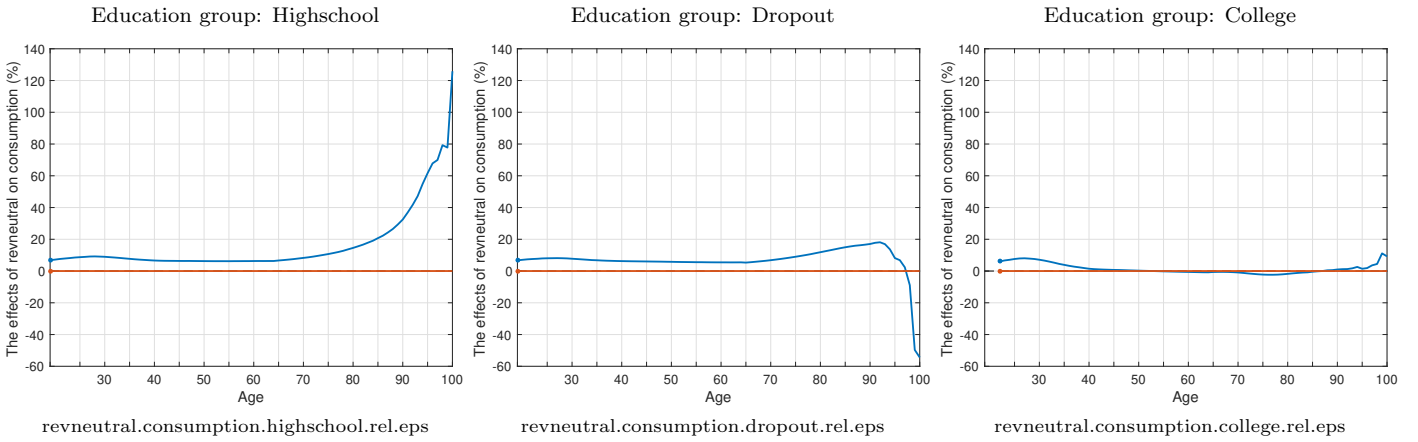


3.1.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



Plotted differences: Relative

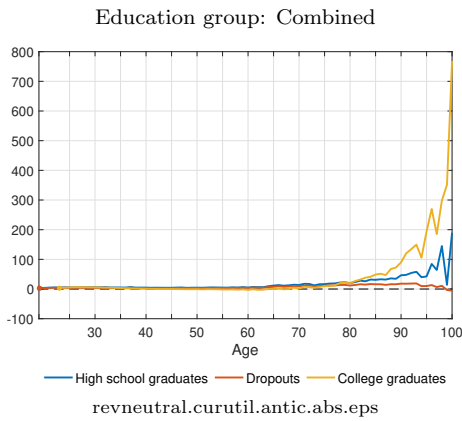


3.2 Simulated moment: Curutil

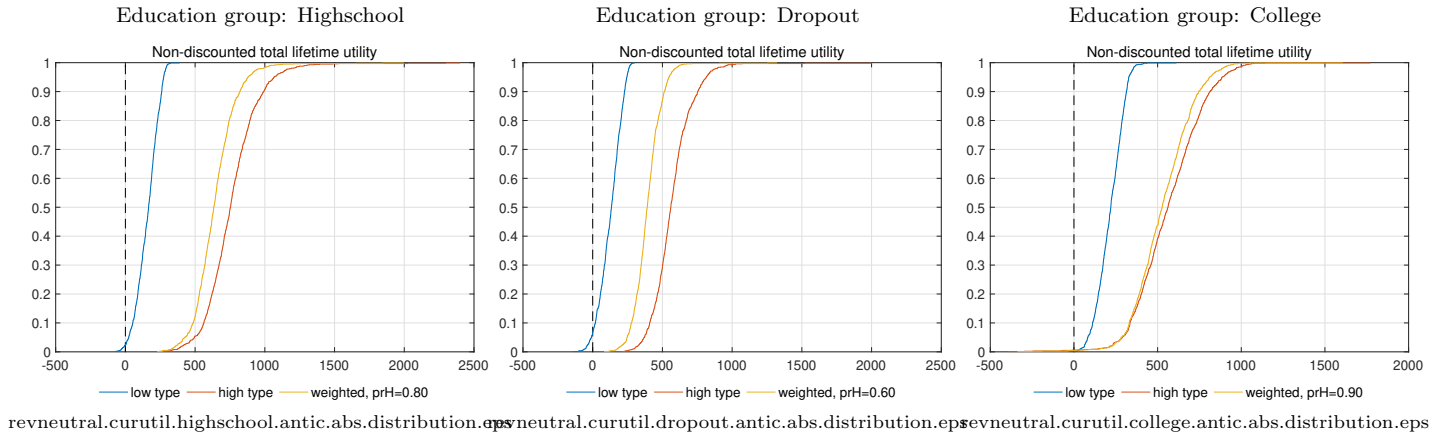
Note: Mean of current realized utility in by age plots. Discounted sum of realized utility in distribution plots.

3.2.1 Policy change: Anticipated

Plotted differences: Absolute

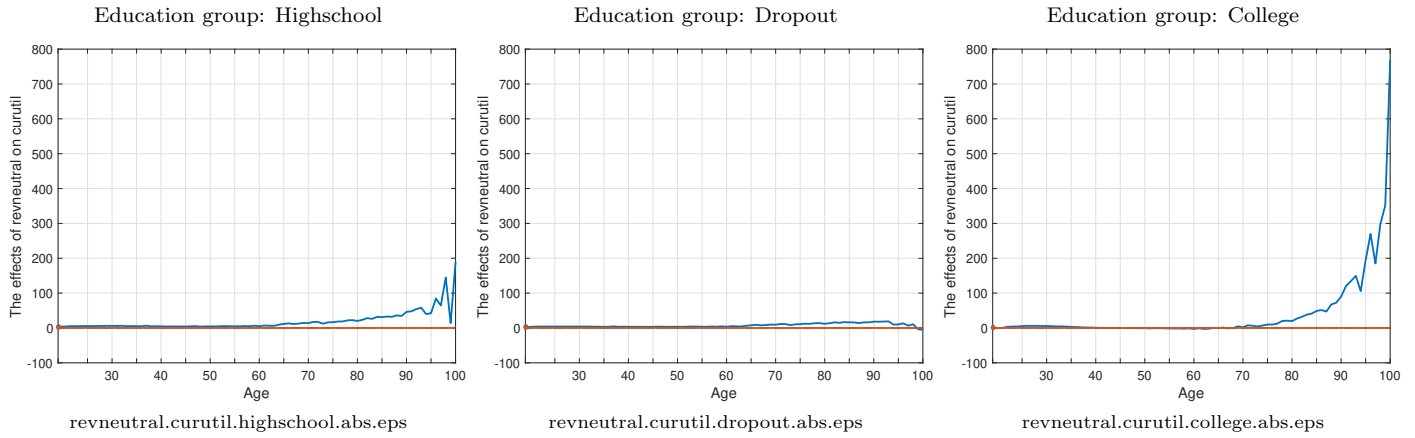


Distribution

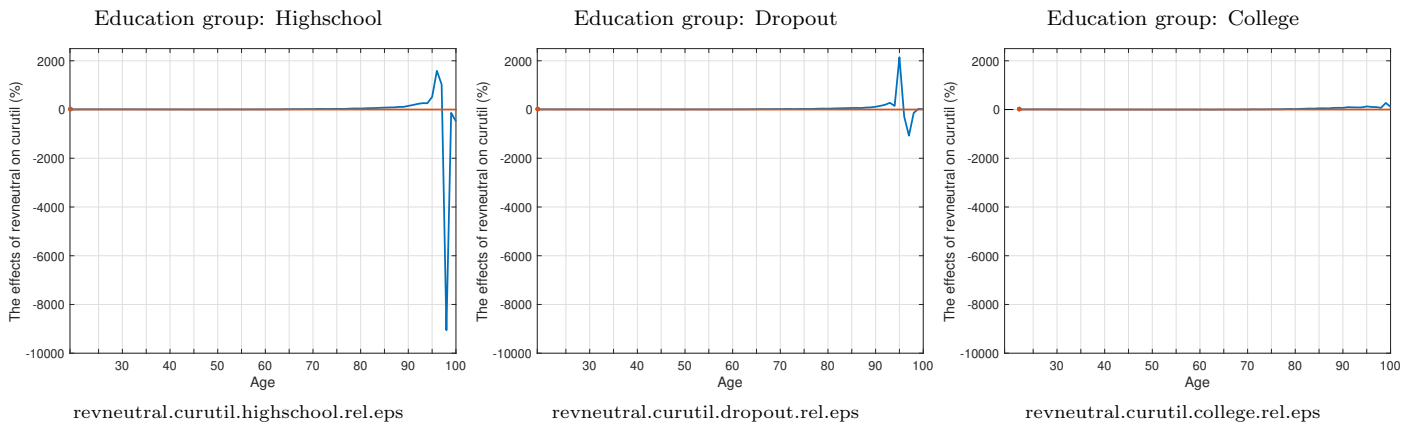


3.2.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



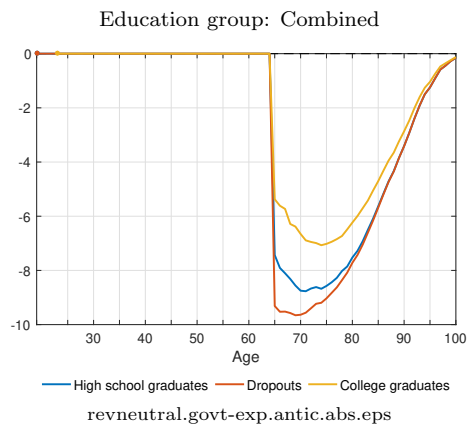
Plotted differences: Relative



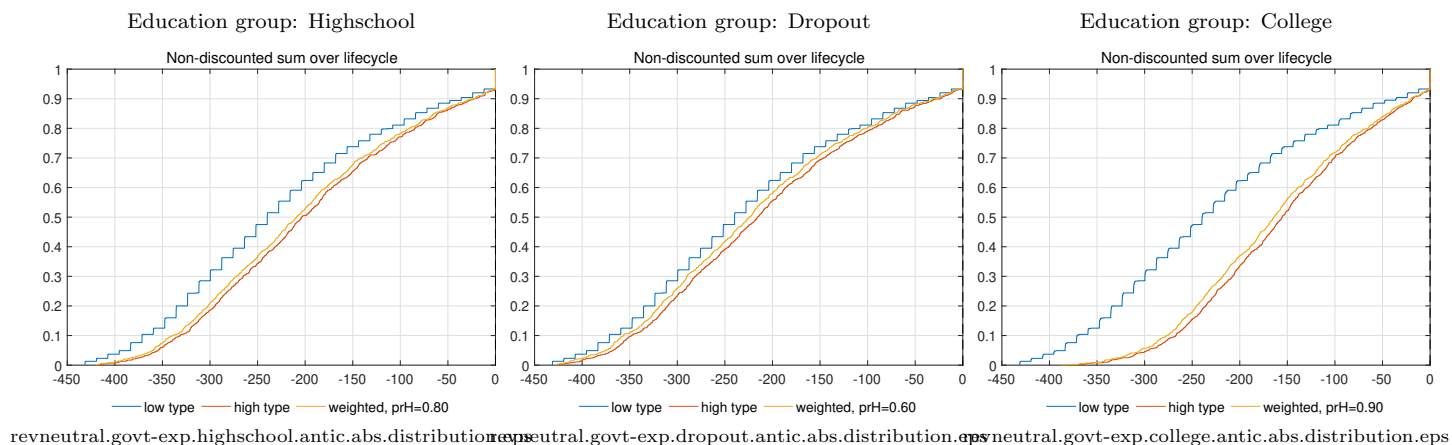
3.3 Simulated moment: Govt-exp

3.3.1 Policy change: Anticipated

Plotted differences: Absolute

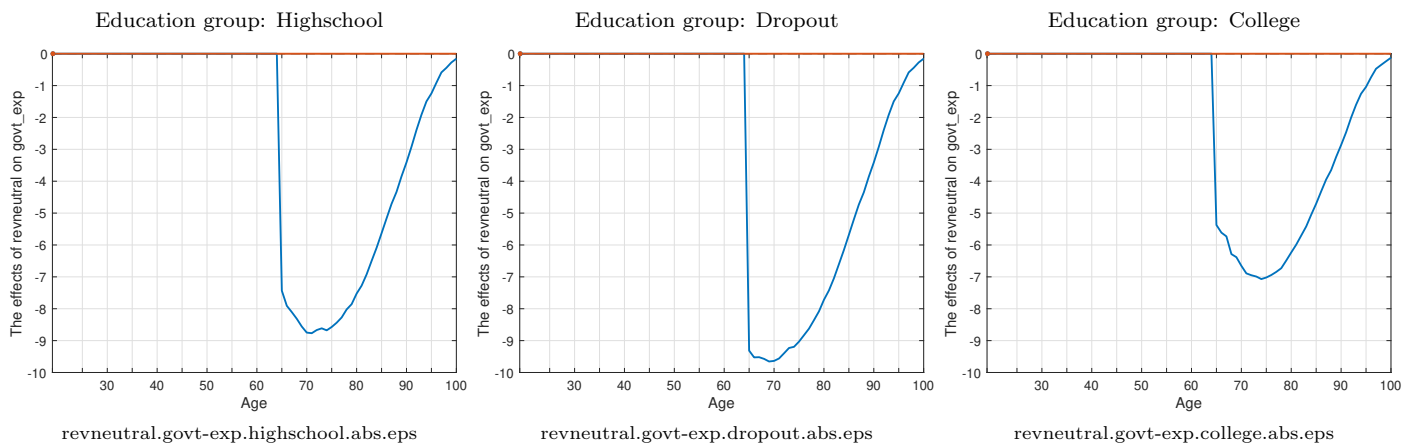


Distribution

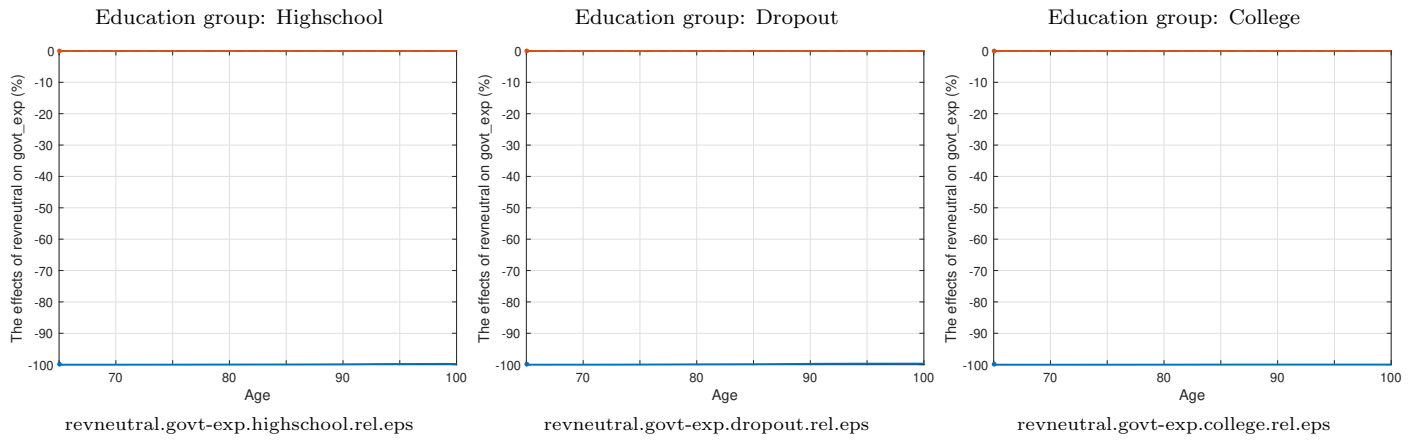


3.3.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



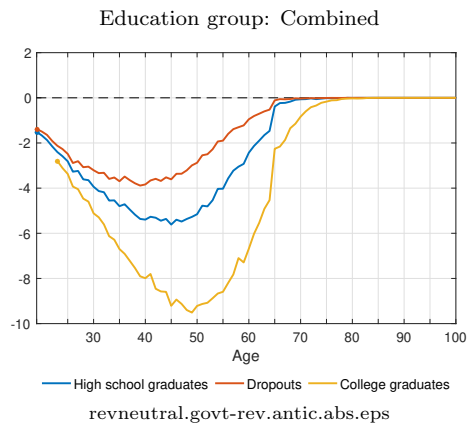
Plotted differences: Relative



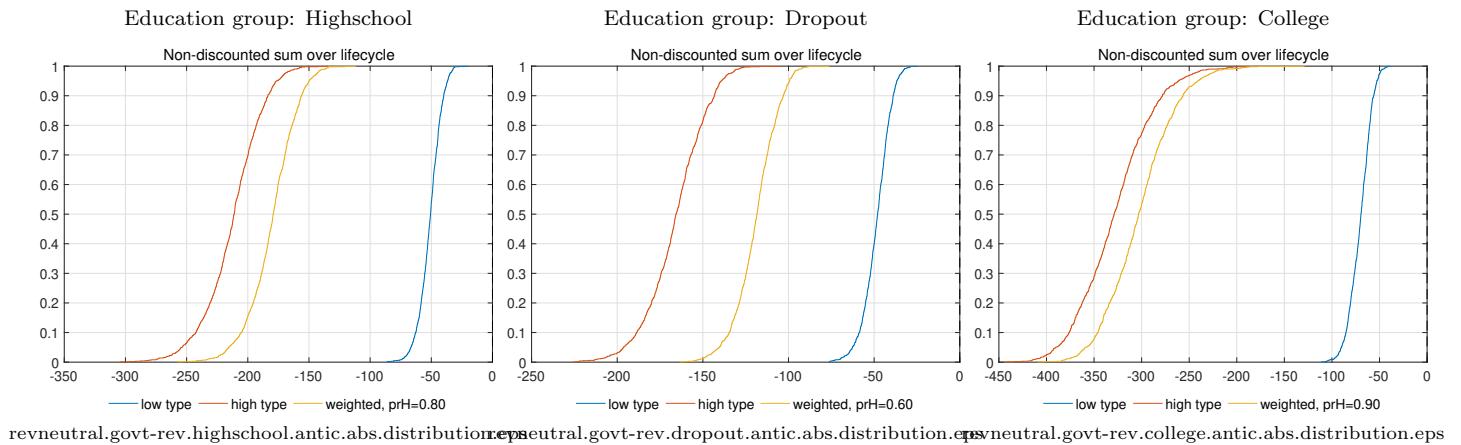
3.4 Simulated moment: Govt-rev

3.4.1 Policy change: Anticipated

Plotted differences: Absolute

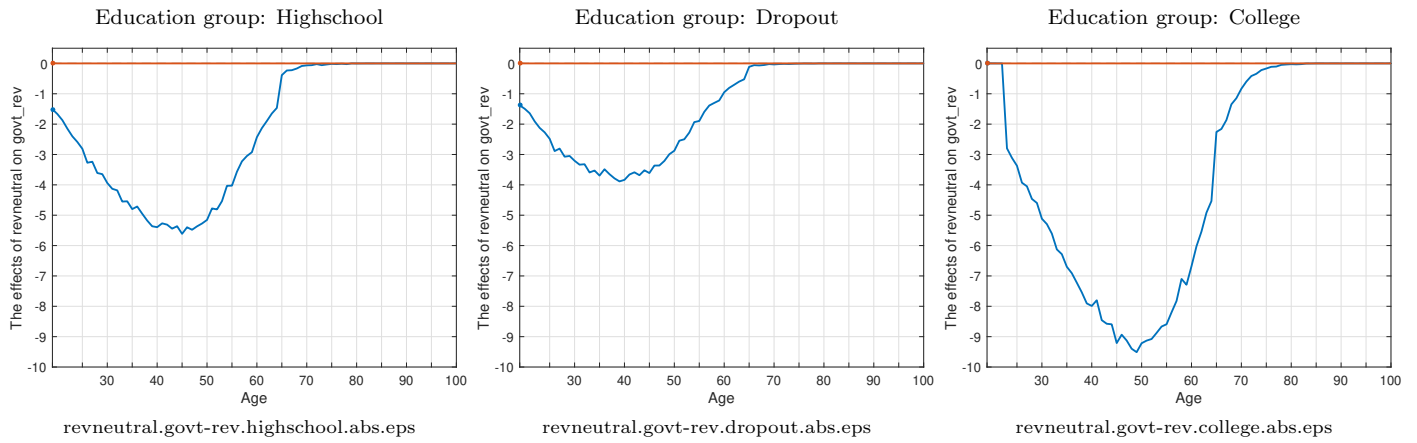


Distribution

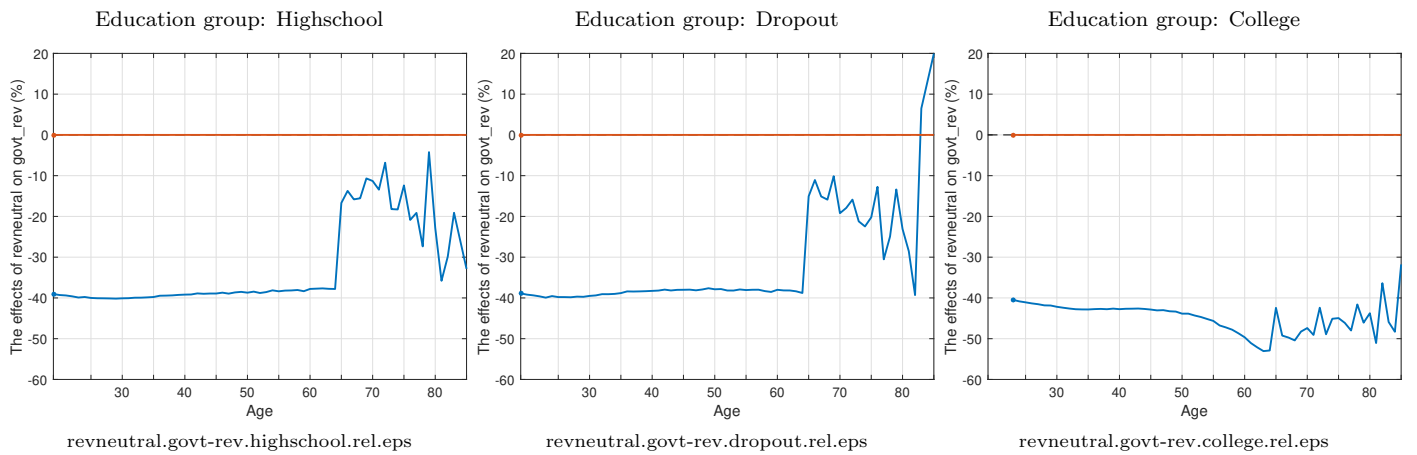


3.4.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



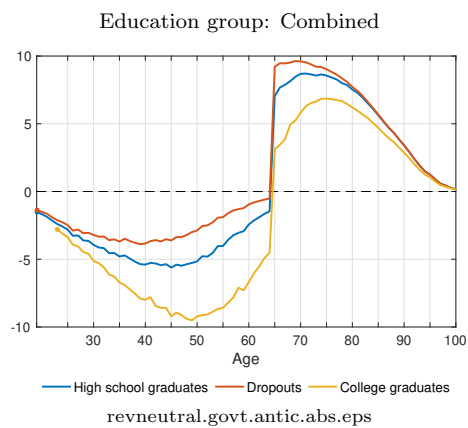
Plotted differences: Relative



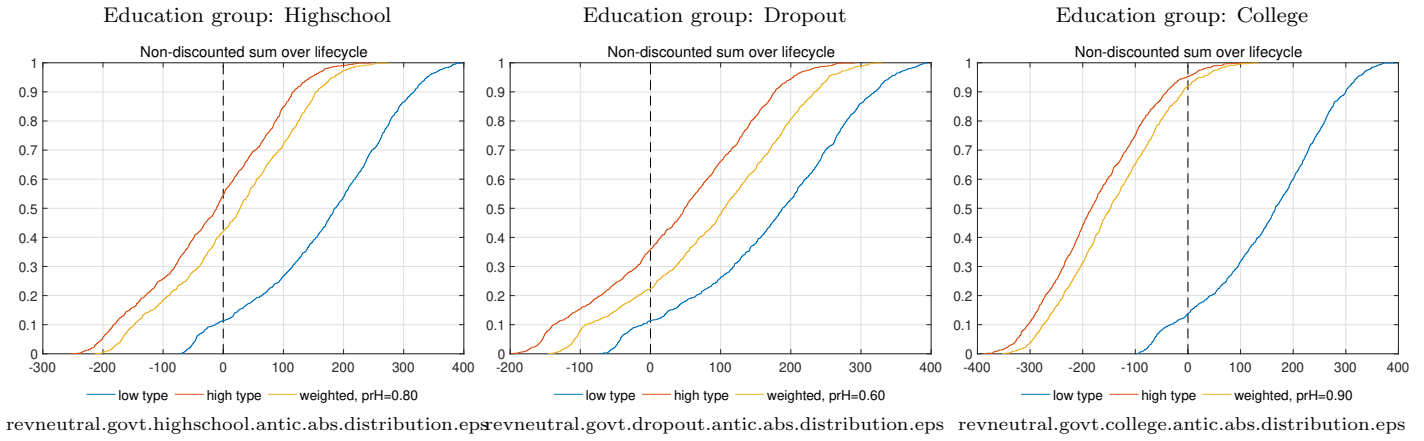
3.5 Simulated moment: Govt

3.5.1 Policy change: Anticipated

Plotted differences: Absolute

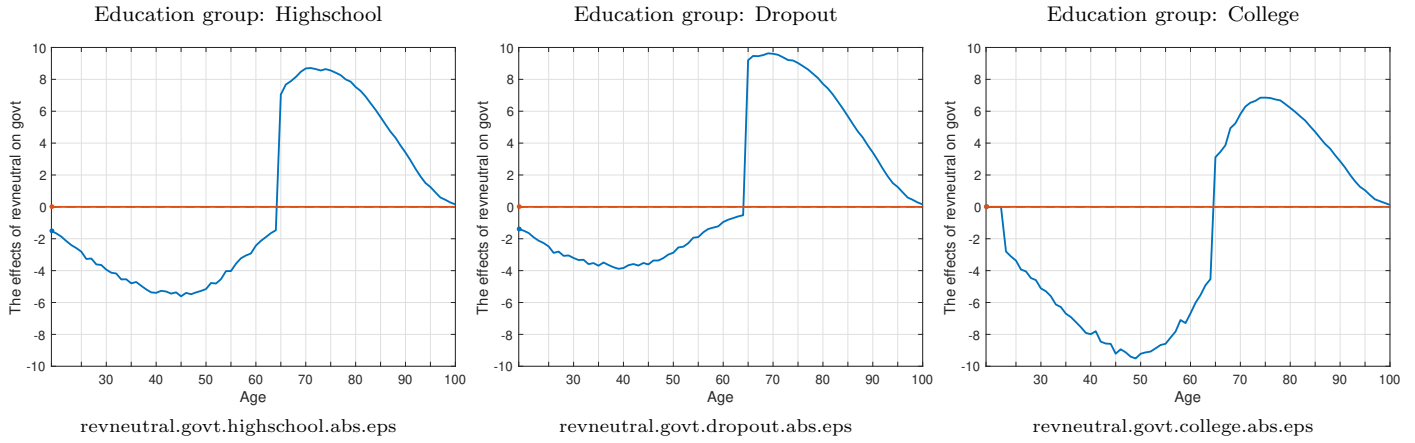


Distribution

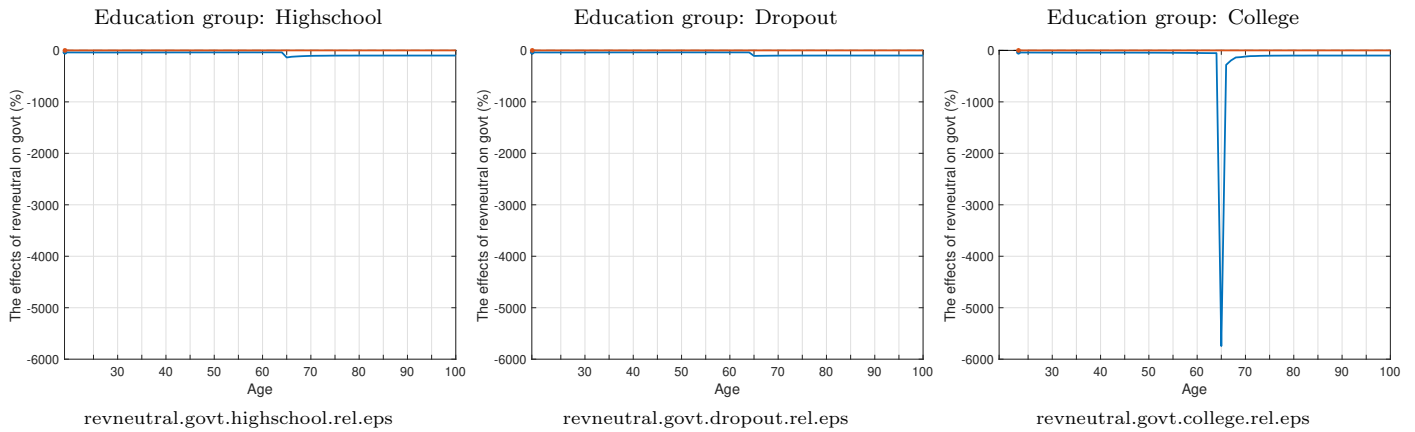


3.5.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



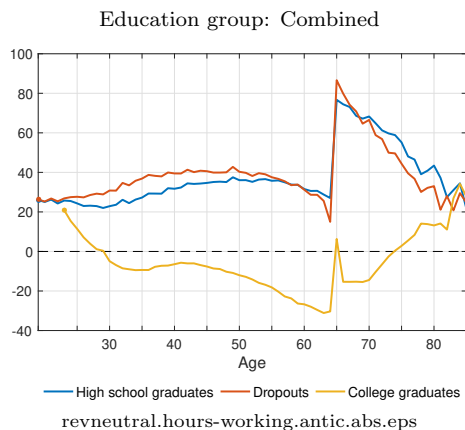
Plotted differences: Relative



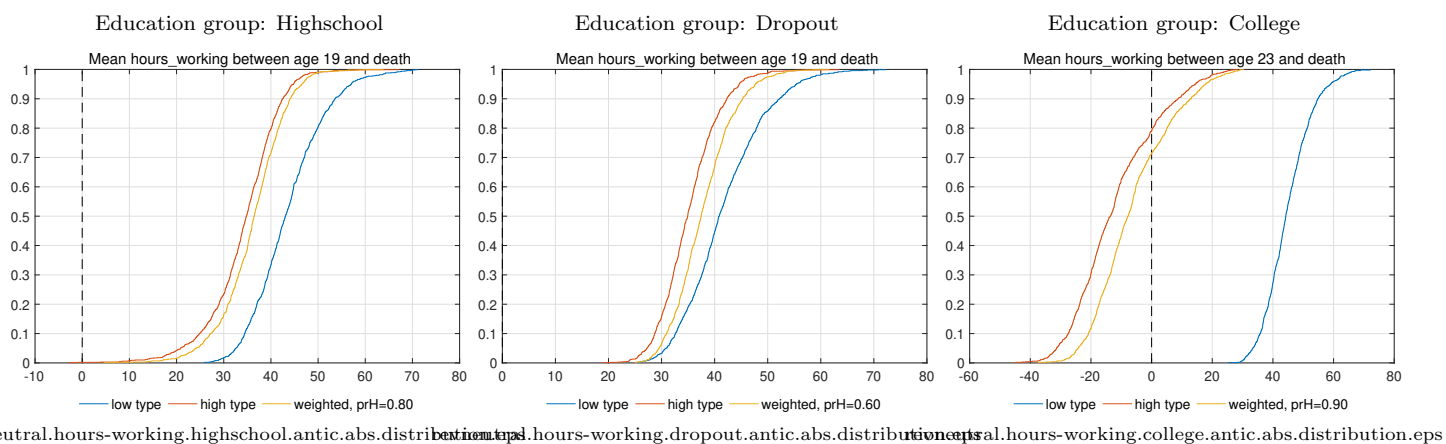
3.6 Simulated moment: Hours-working

3.6.1 Policy change: Anticipated

Plotted differences: Absolute

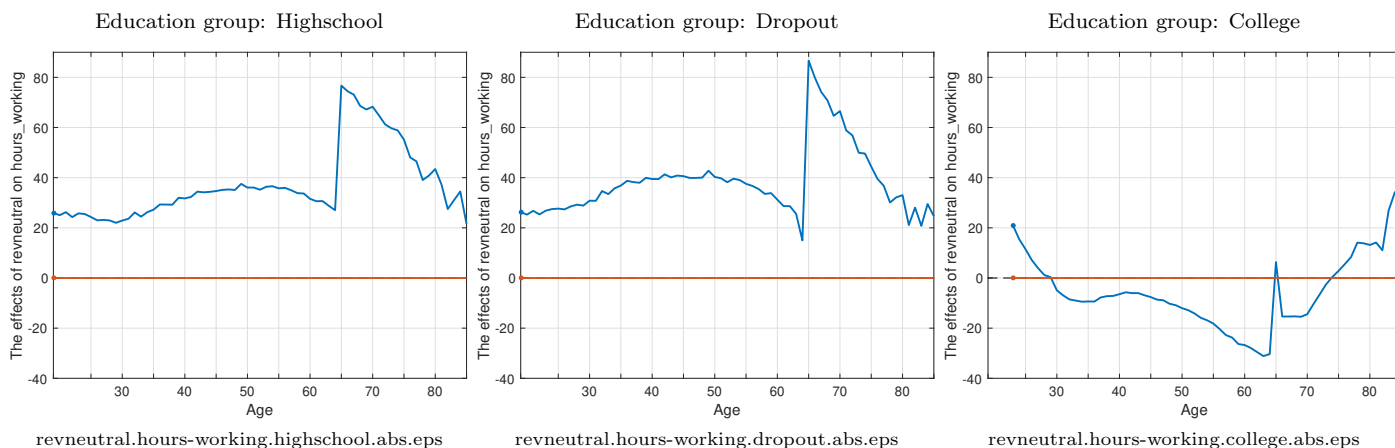


Distribution

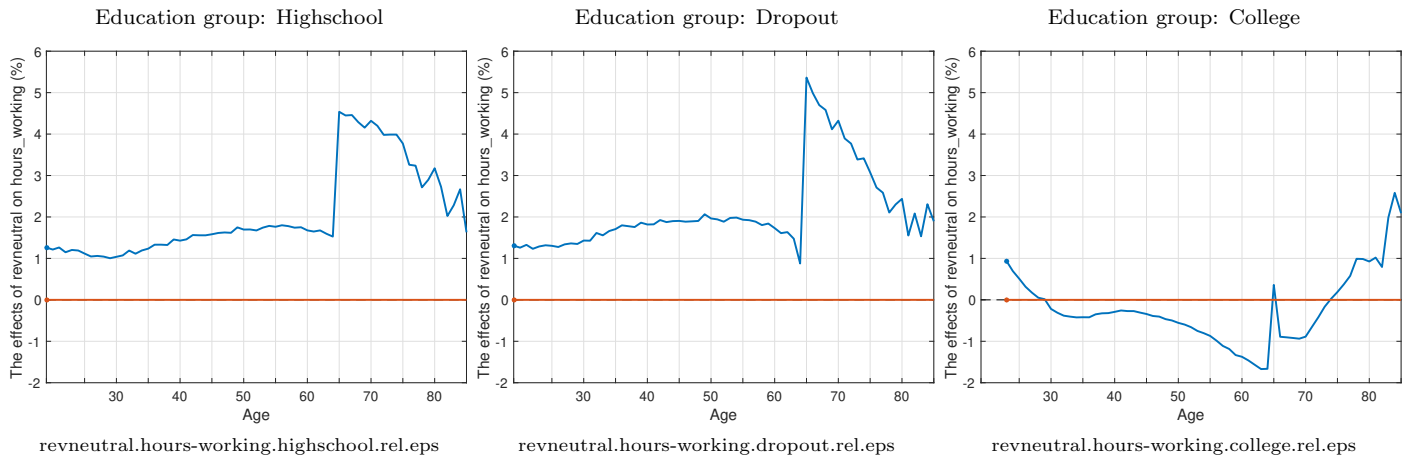


3.6.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



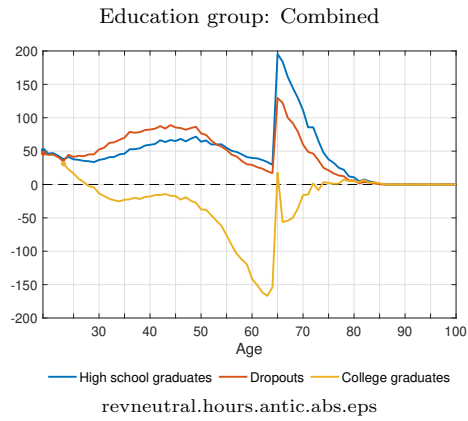
Plotted differences: Relative



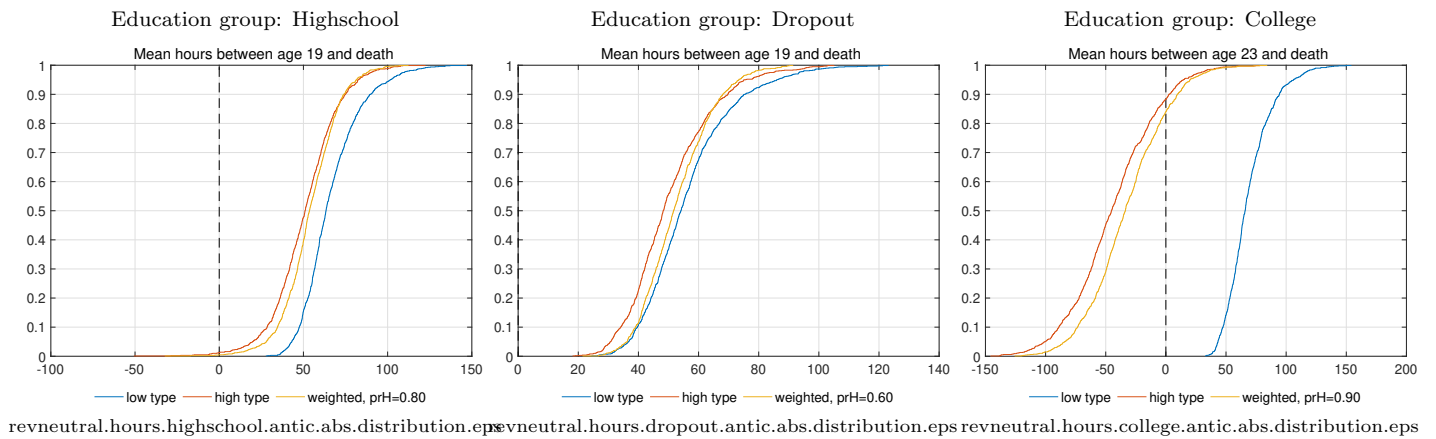
3.7 Simulated moment: Hours

3.7.1 Policy change: Anticipated

Plotted differences: Absolute

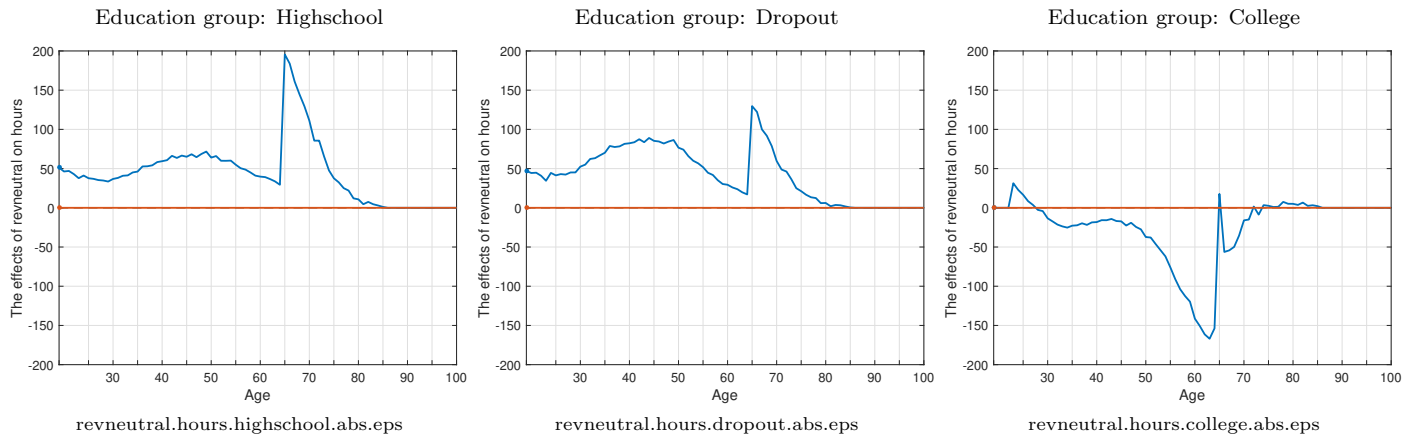


Distribution

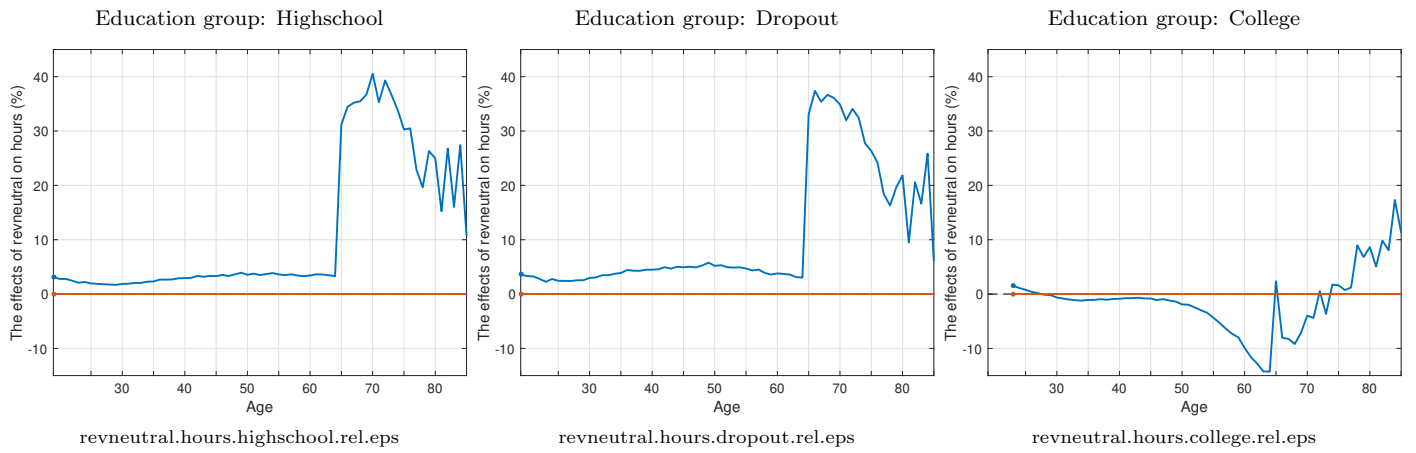


3.7.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



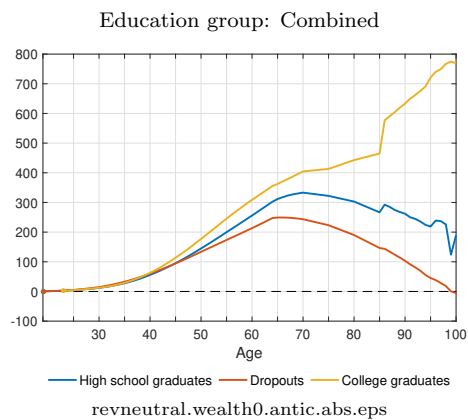
Plotted differences: Relative



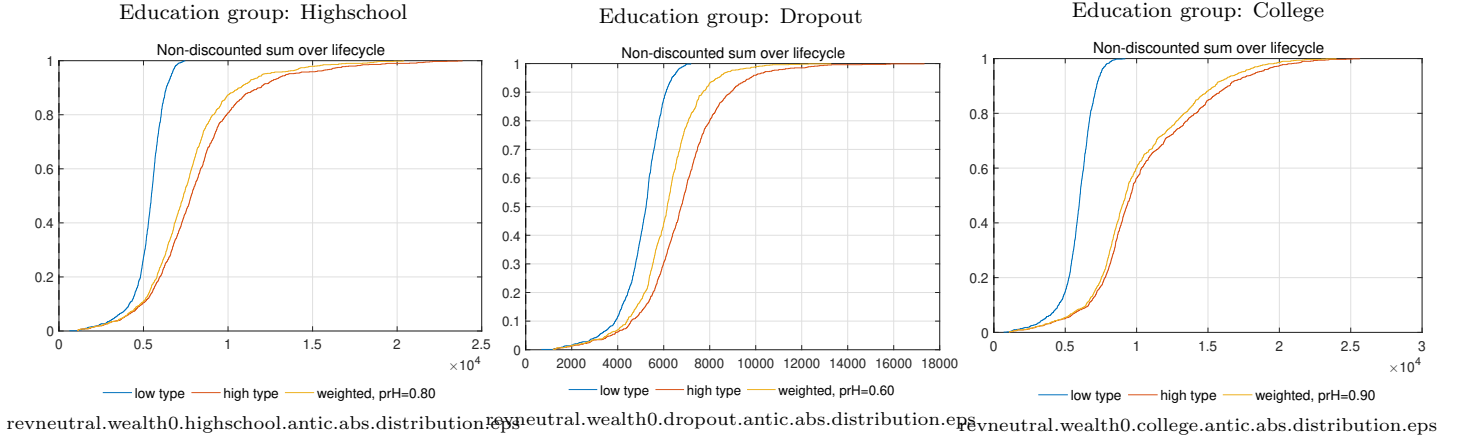
3.8 Simulated moment: Wealth0

3.8.1 Policy change: Anticipated

Plotted differences: Absolute

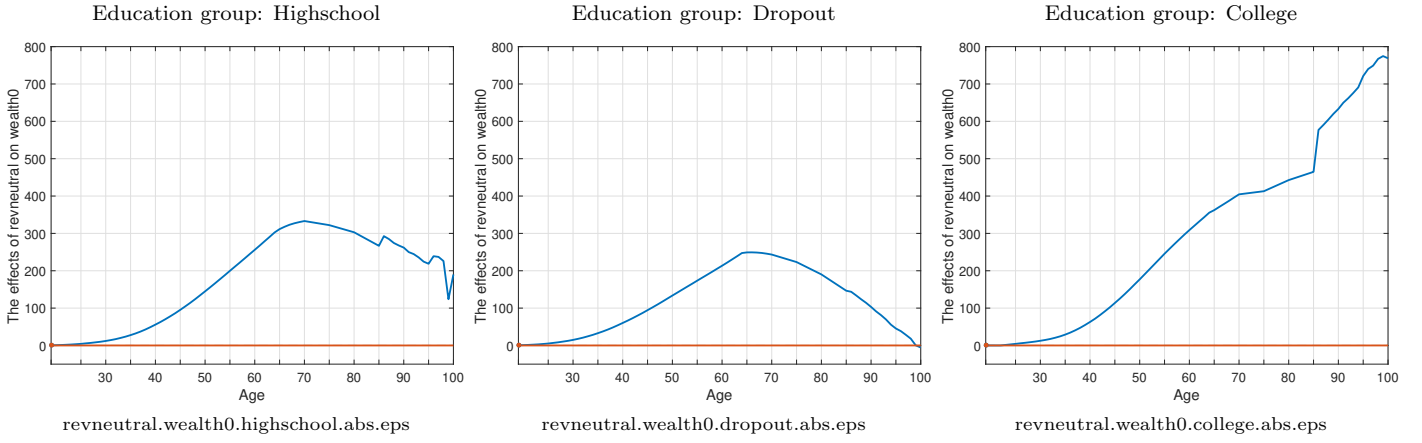


Distribution

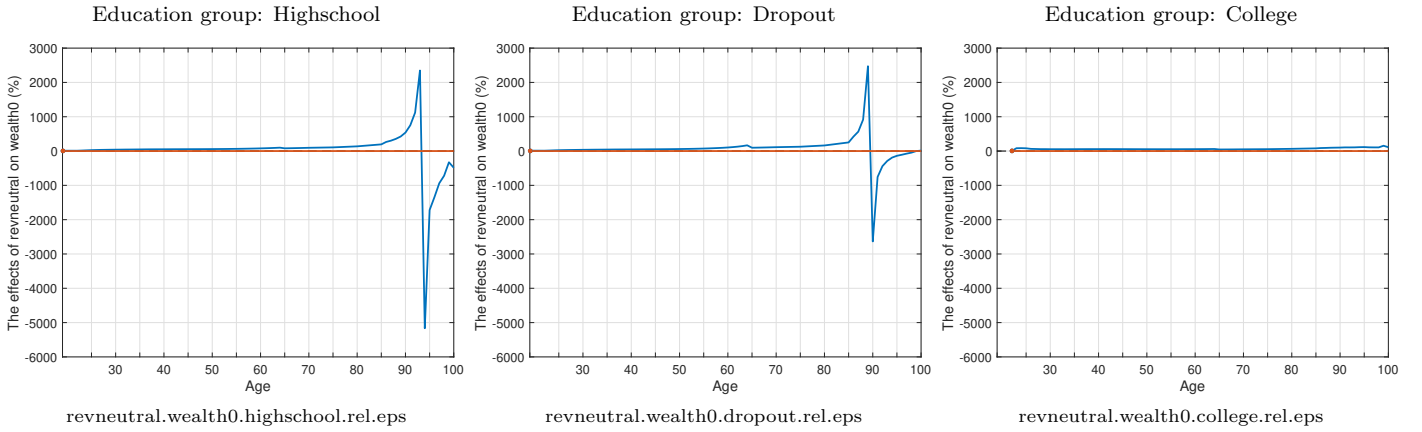


3.8.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



Plotted differences: Relative

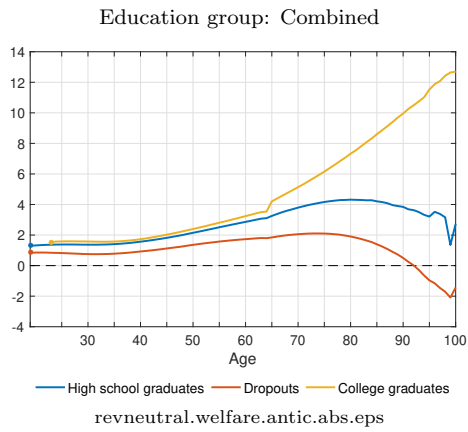


3.9 Simulated moment: Welfare

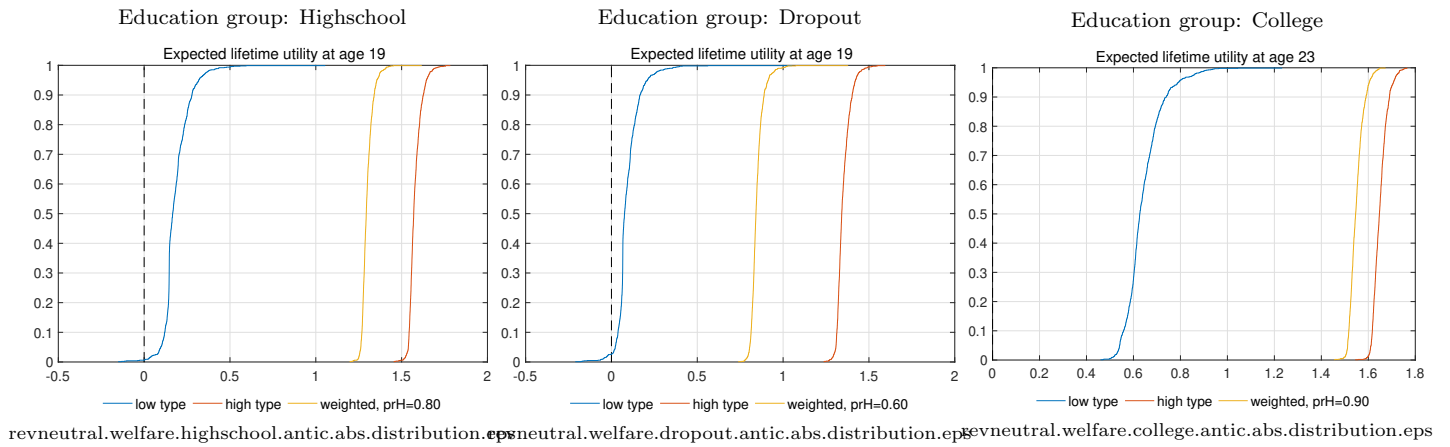
Note: Mean of value function at simulated points in by age plots. Expected lifetime utility at initial age in distribution plots.

3.9.1 Policy change: Anticipated

Plotted differences: Absolute

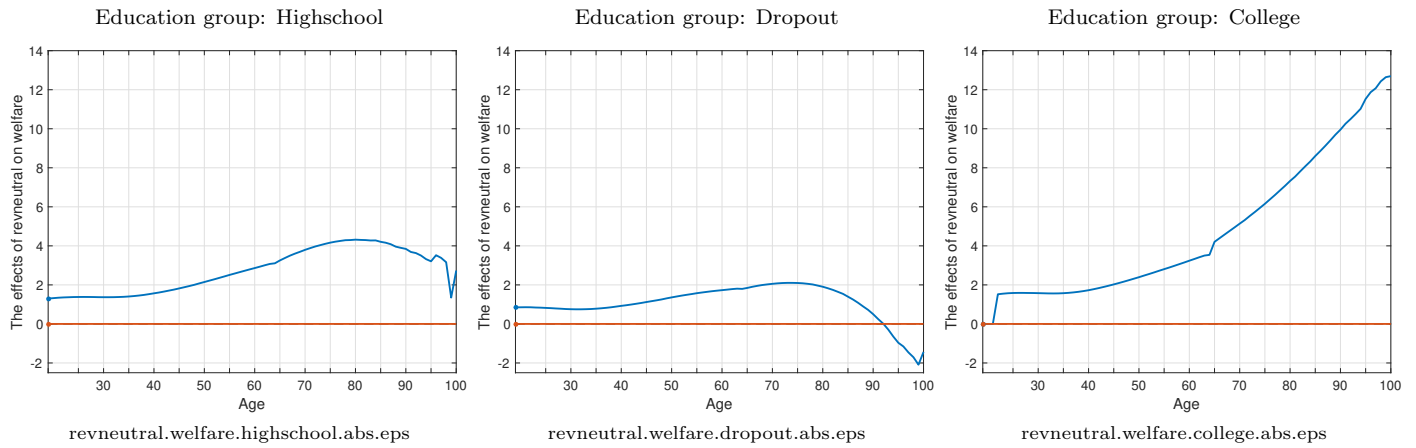


Distribution

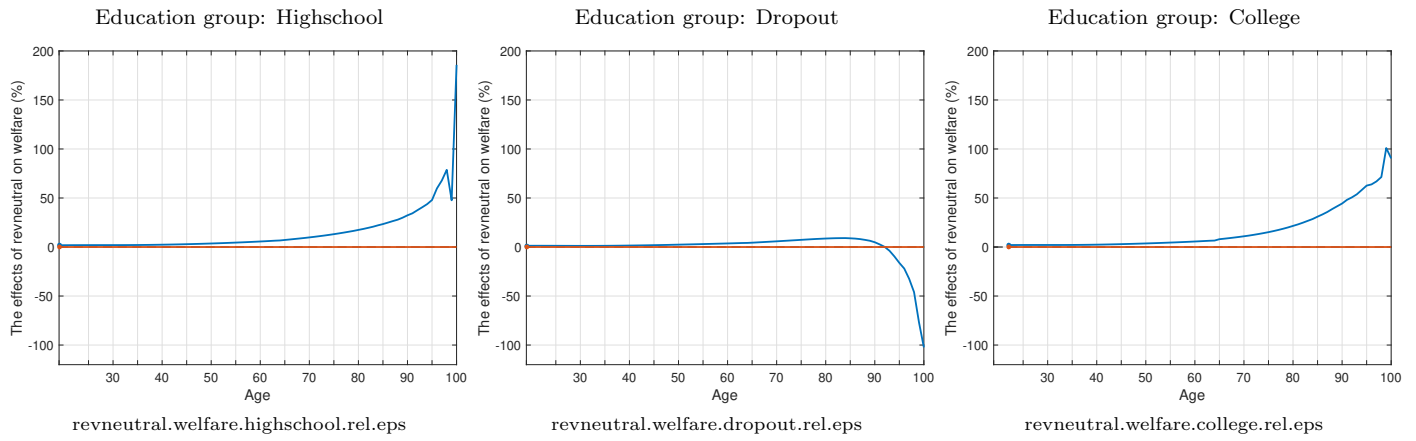


3.9.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



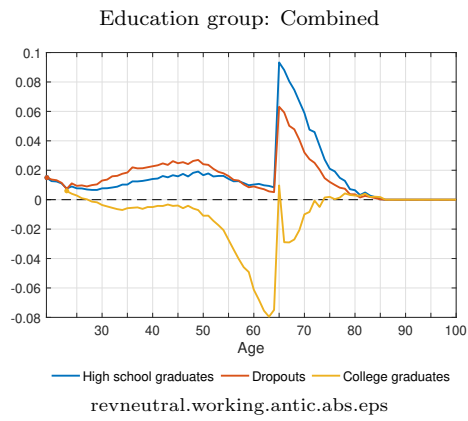
Plotted differences: Relative



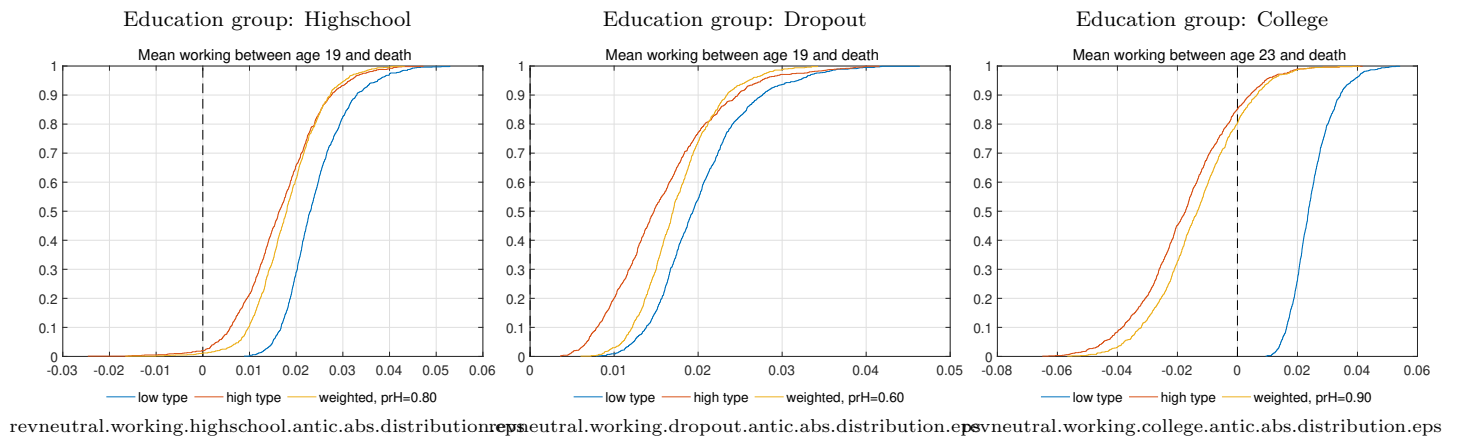
3.10 Simulated moment: Working

3.10.1 Policy change: Anticipated

Plotted differences: Absolute

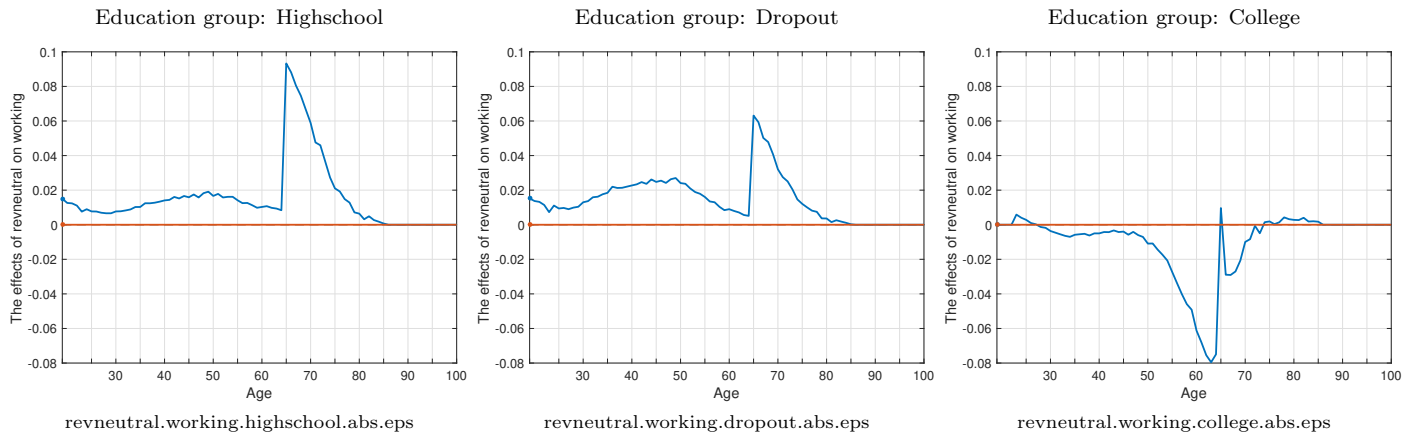


Distribution

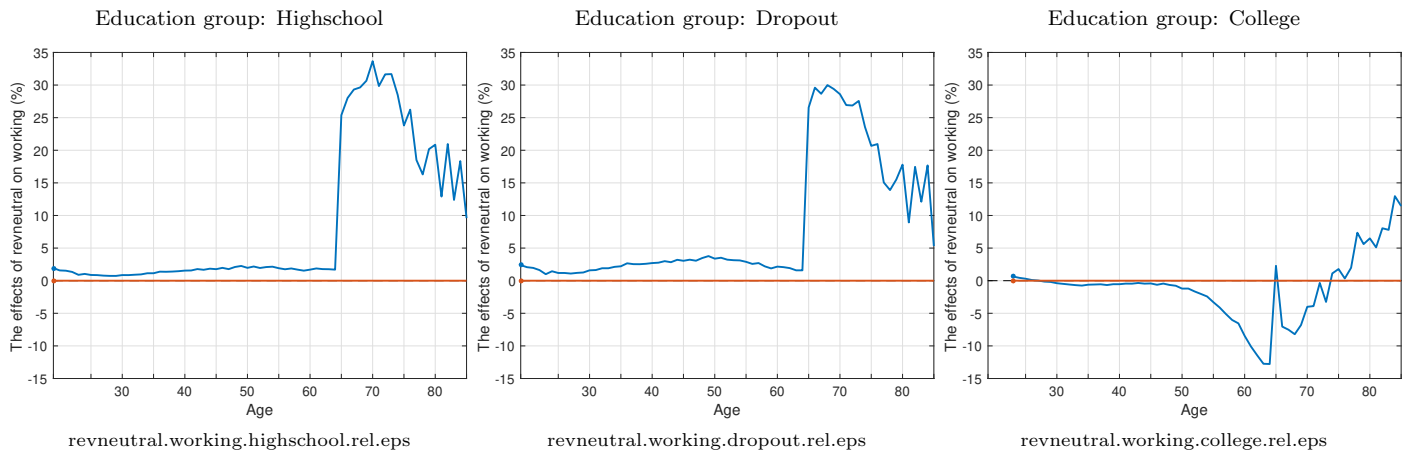


3.10.2 Policy change: Combined anticipated and unanticipated

Plotted differences: Absolute



Plotted differences: Relative



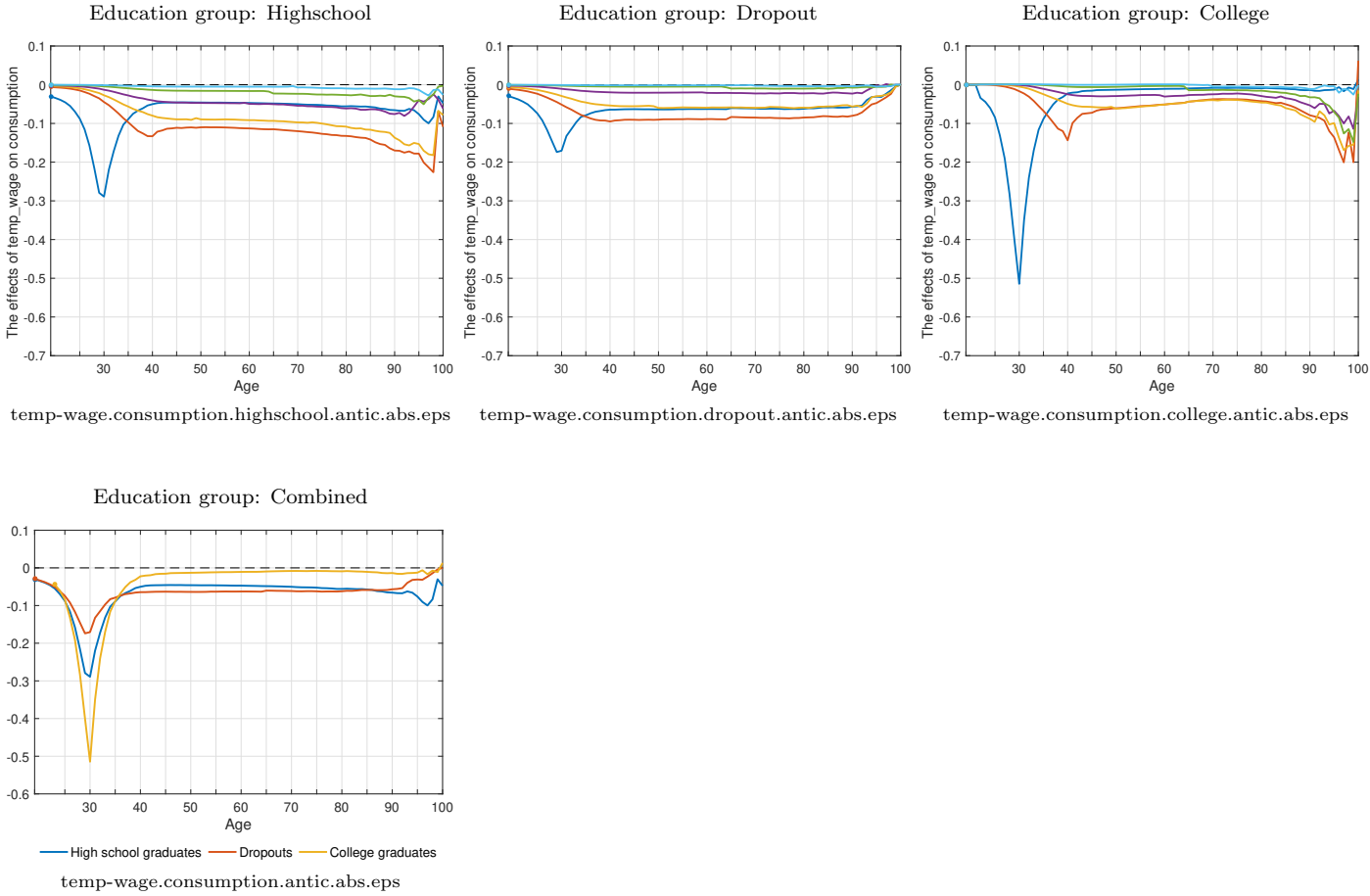
4 Policy: Temp wage

Temporary wage reduction (-10%)

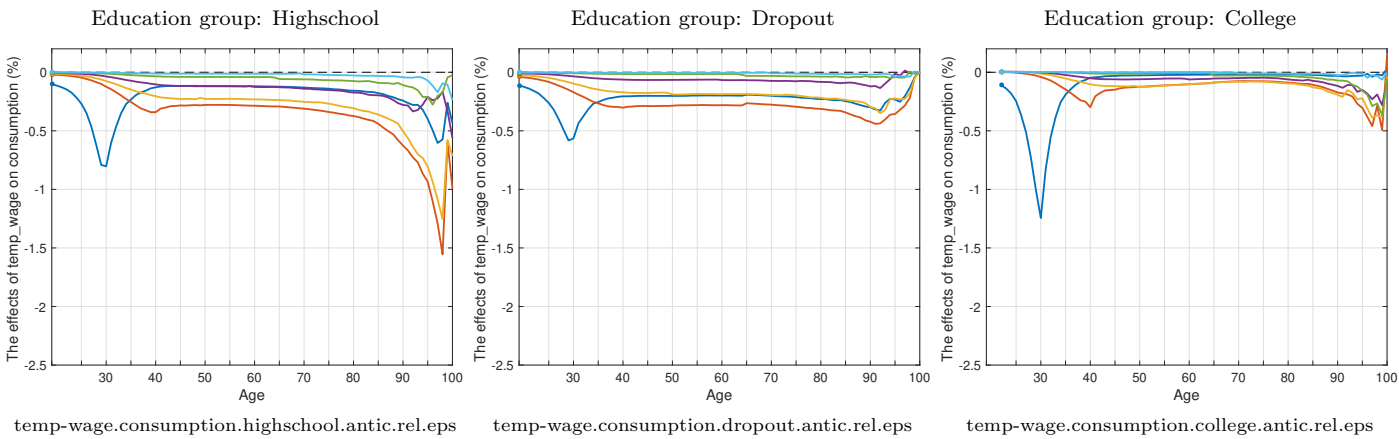
4.1 Simulated moment: Consumption

4.1.1 Policy change: Anticipated

Plotted differences: Absolute

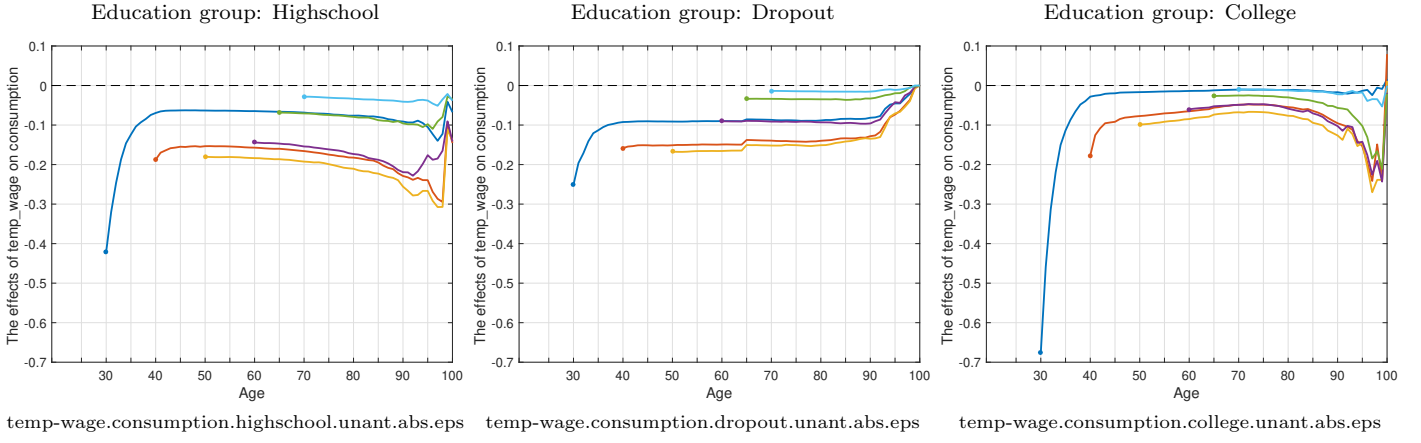


Plotted differences: Relative

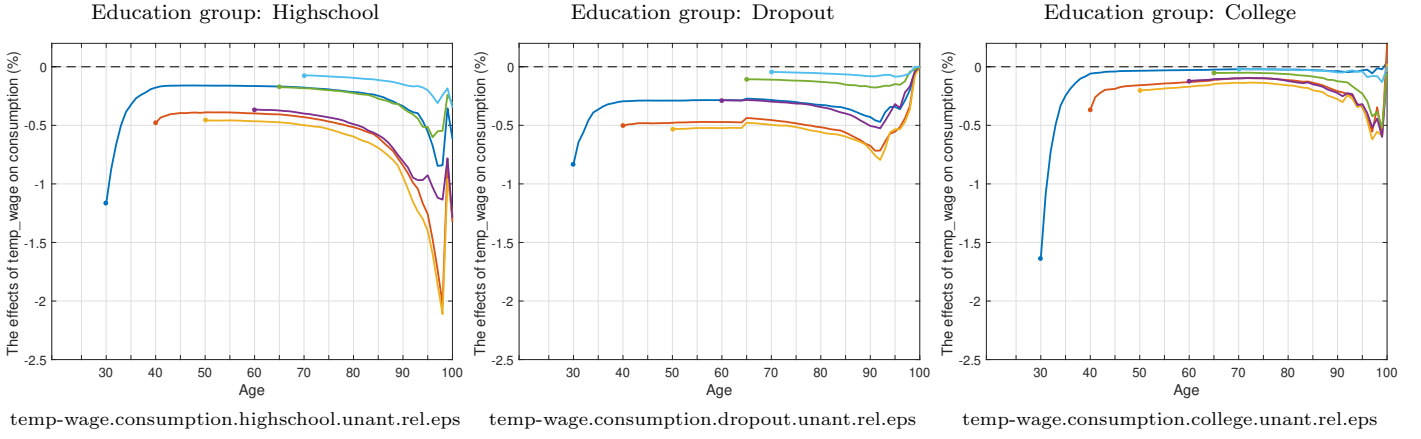


4.1.2 Policy change: Unanticipated

Plotted differences: Absolute



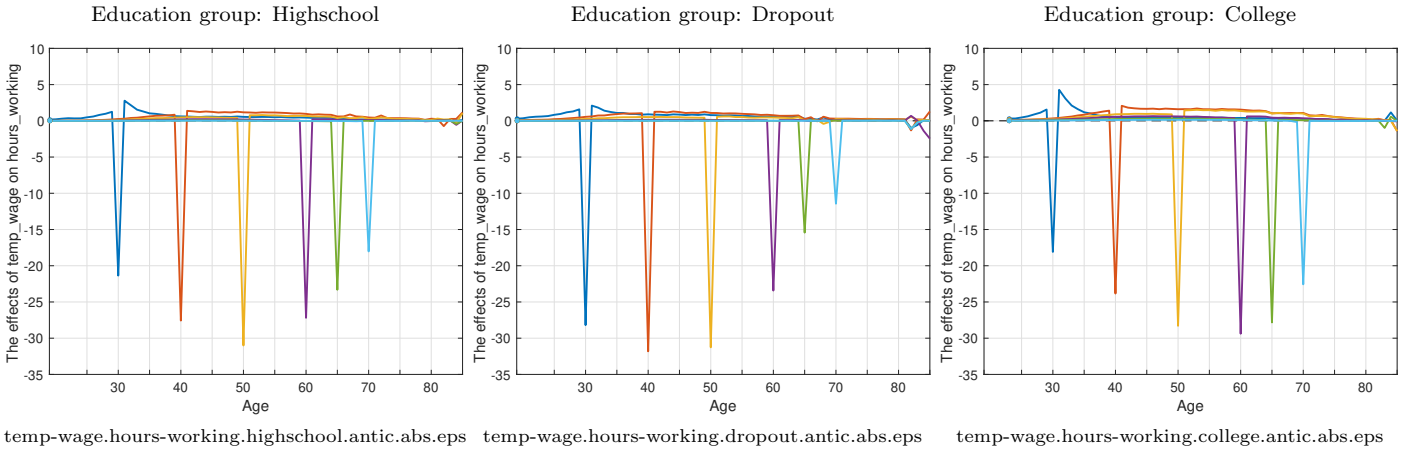
Plotted differences: Relative

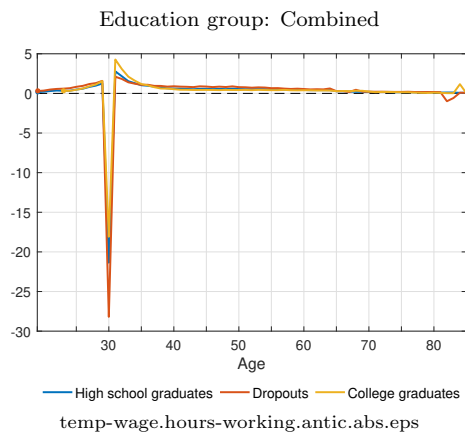


4.2 Simulated moment: Hours-working

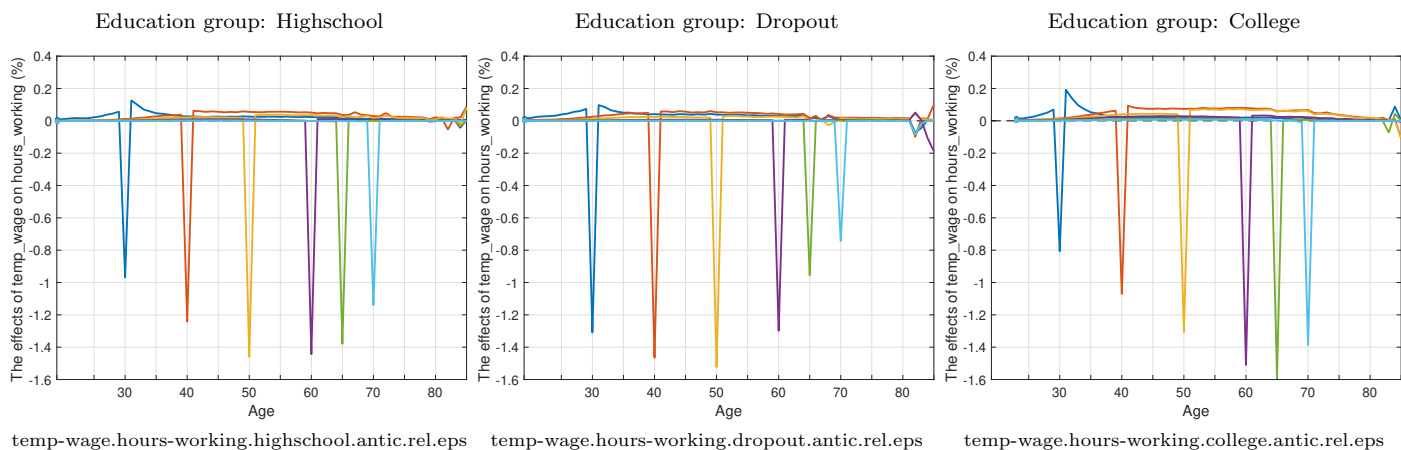
4.2.1 Policy change: Anticipated

Plotted differences: Absolute



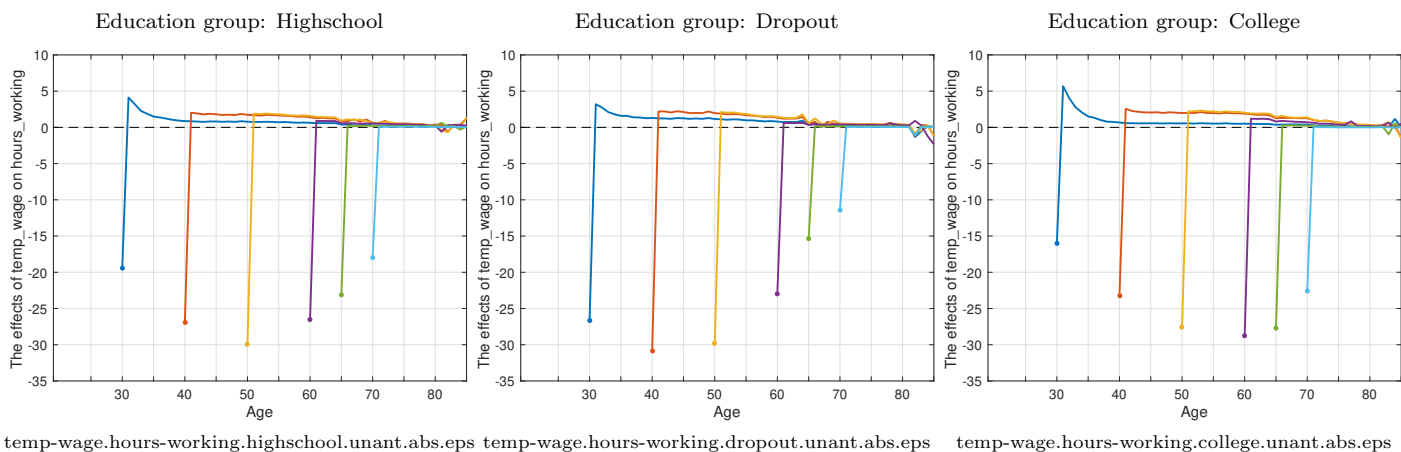


Plotted differences: Relative

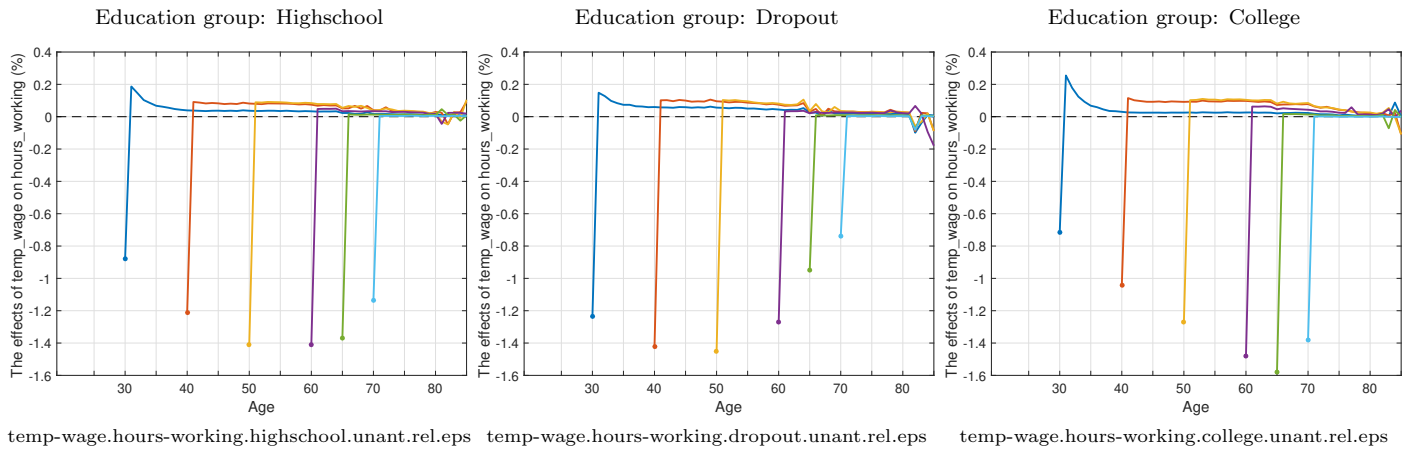


4.2.2 Policy change: Unanticipated

Plotted differences: Absolute



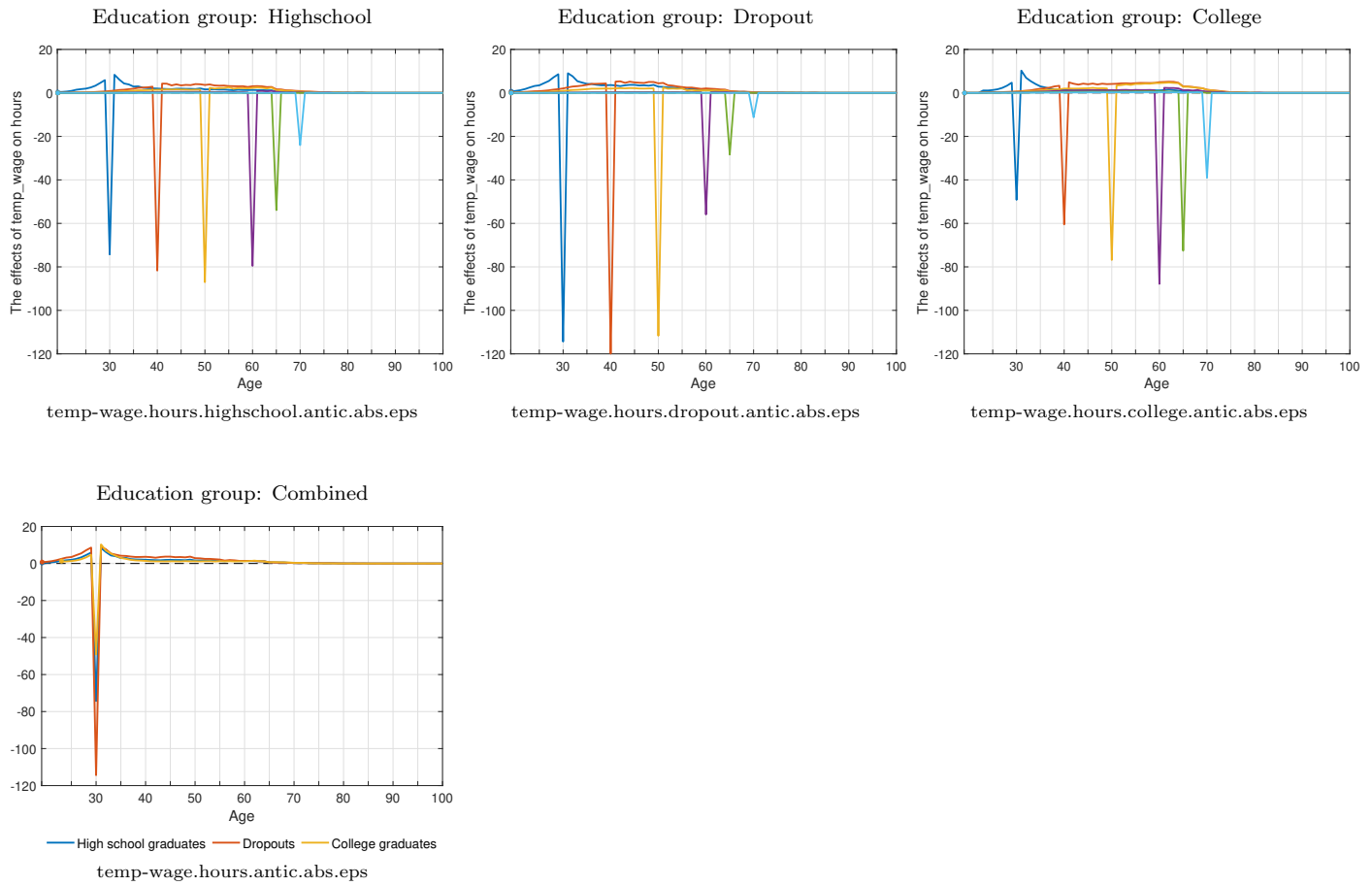
Plotted differences: Relative



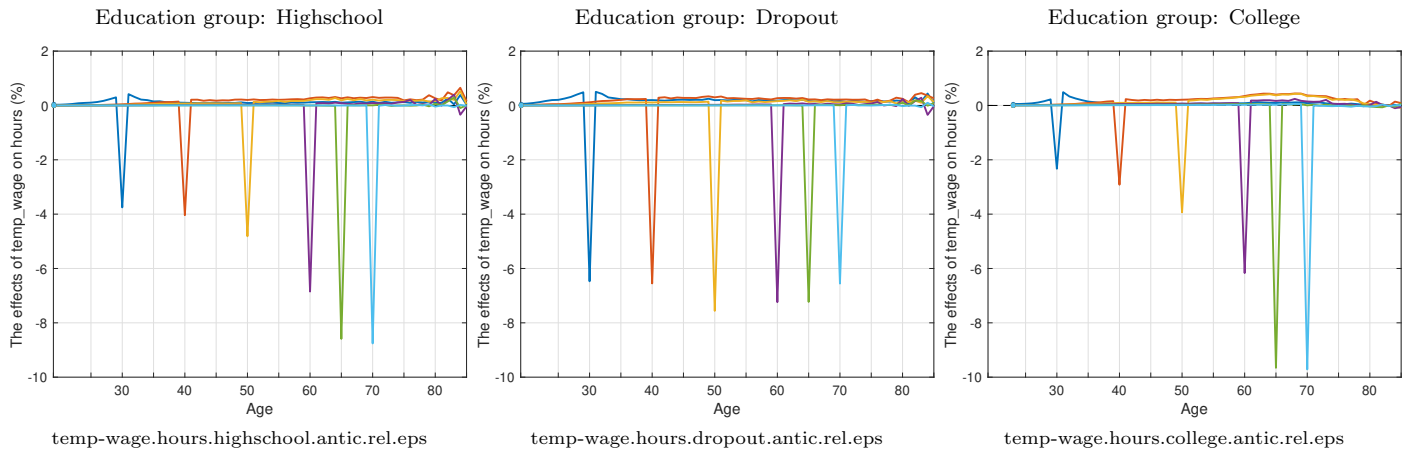
4.3 Simulated moment: Hours

4.3.1 Policy change: Anticipated

Plotted differences: Absolute

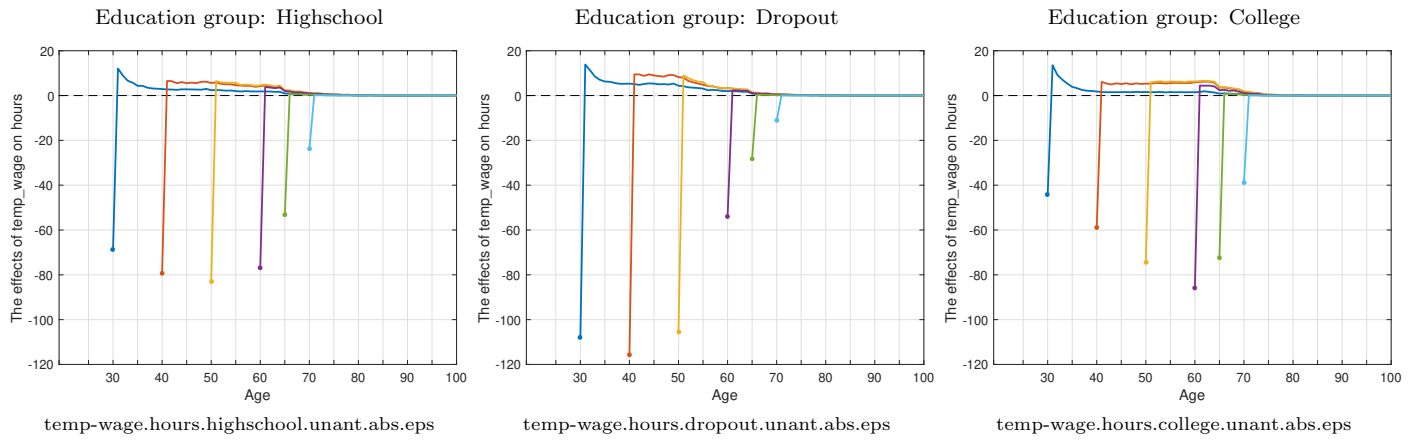


Plotted differences: Relative

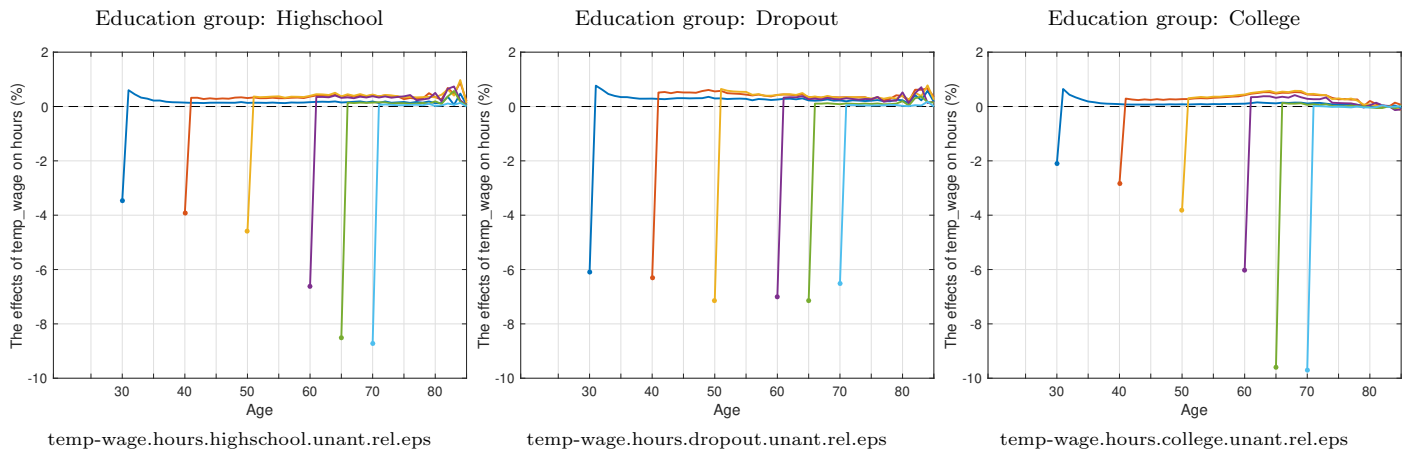


4.3.2 Policy change: Unanticipated

Plotted differences: Absolute



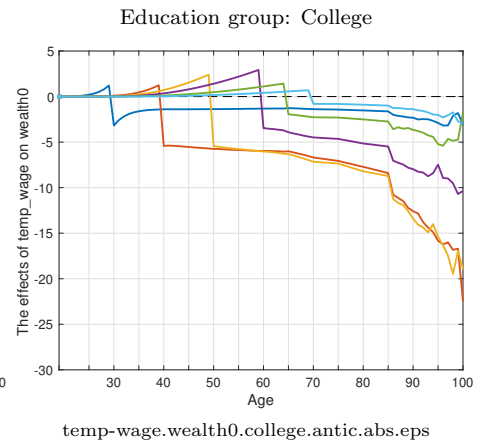
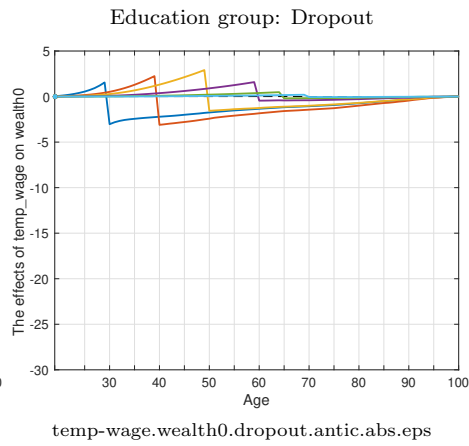
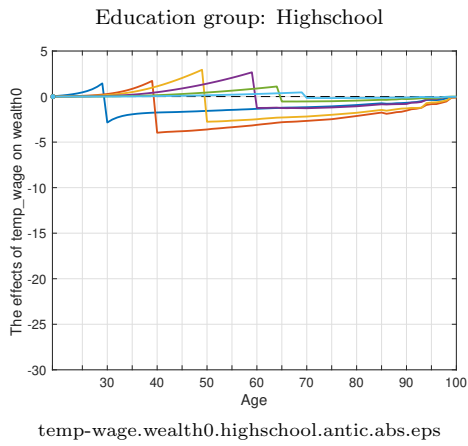
Plotted differences: Relative



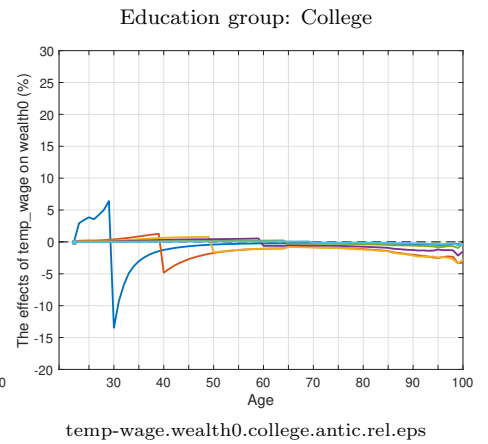
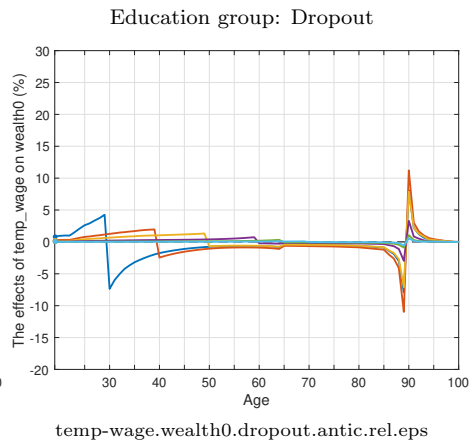
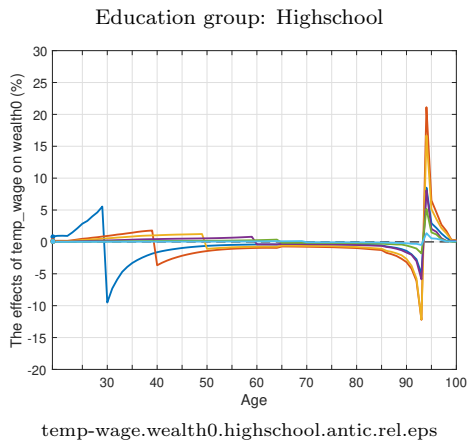
4.4 Simulated moment: Wealth0

4.4.1 Policy change: Anticipated

Plotted differences: Absolute

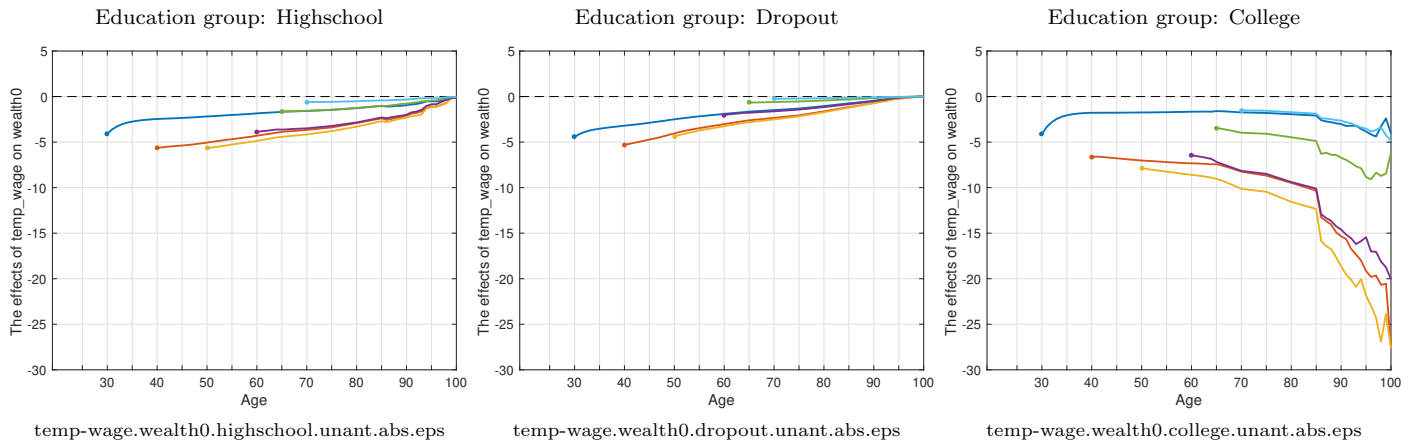


Plotted differences: Relative

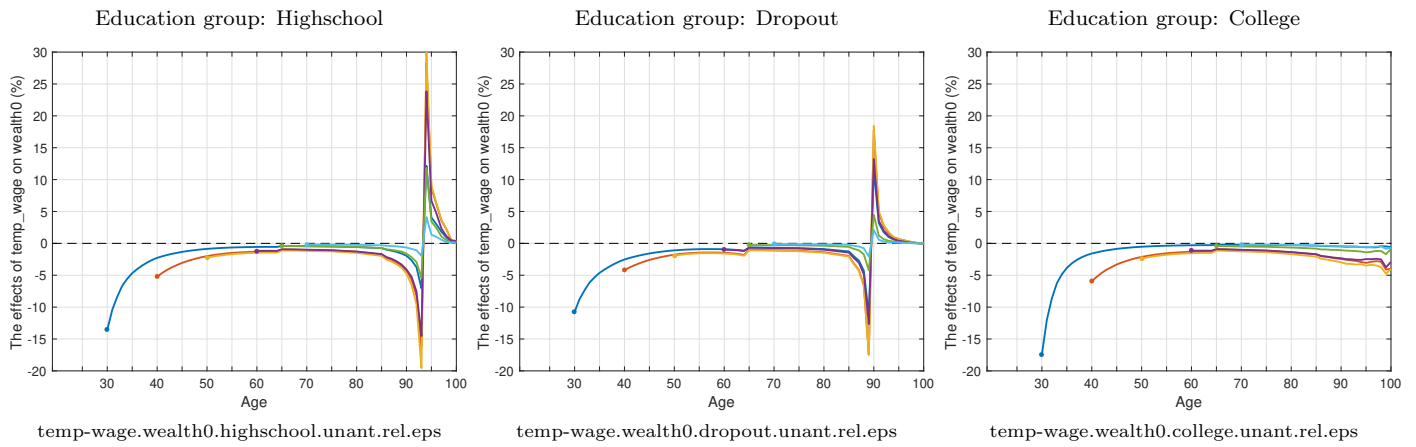


4.4.2 Policy change: Unanticipated

Plotted differences: Absolute



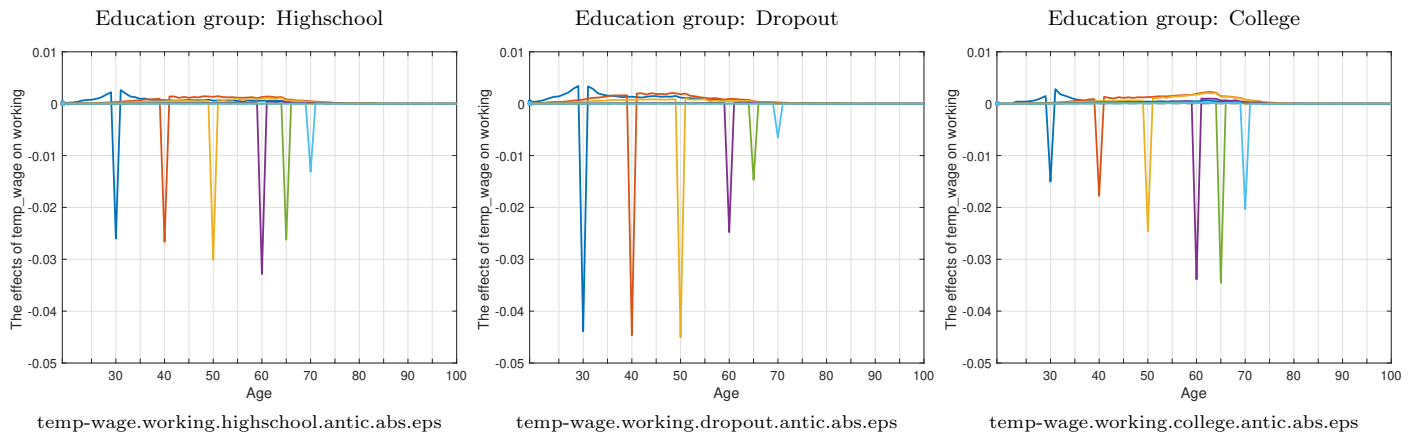
Plotted differences: Relative

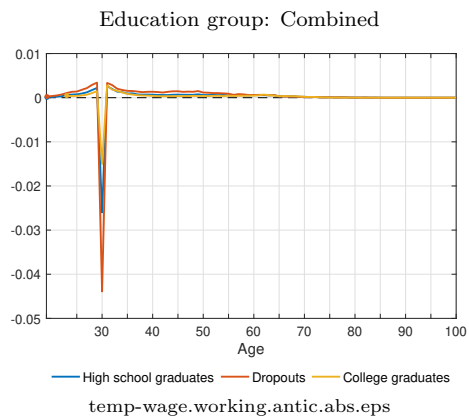


4.5 Simulated moment: Working

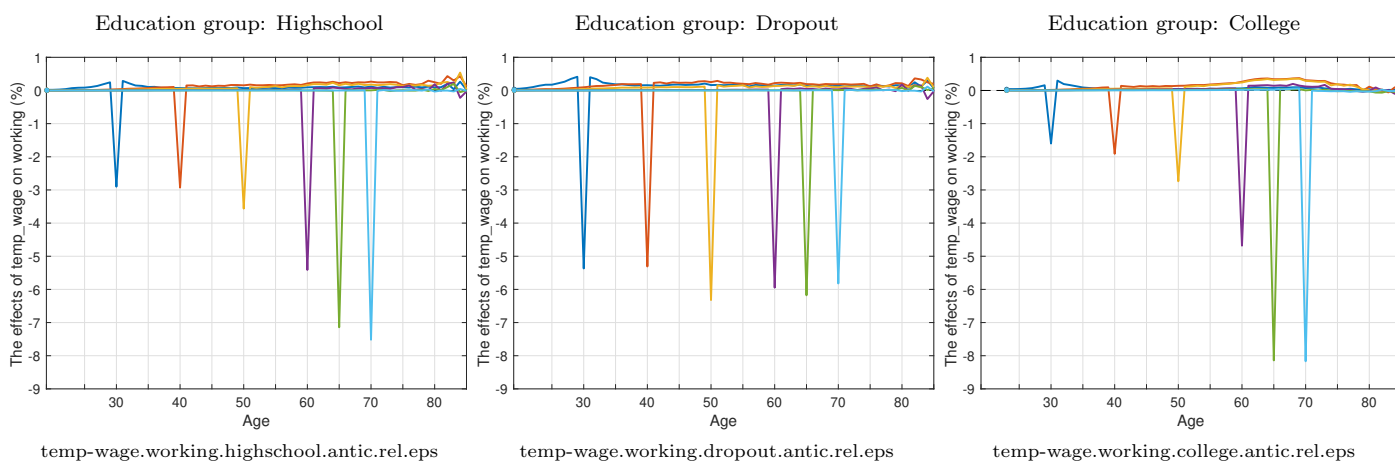
4.5.1 Policy change: Anticipated

Plotted differences: Absolute



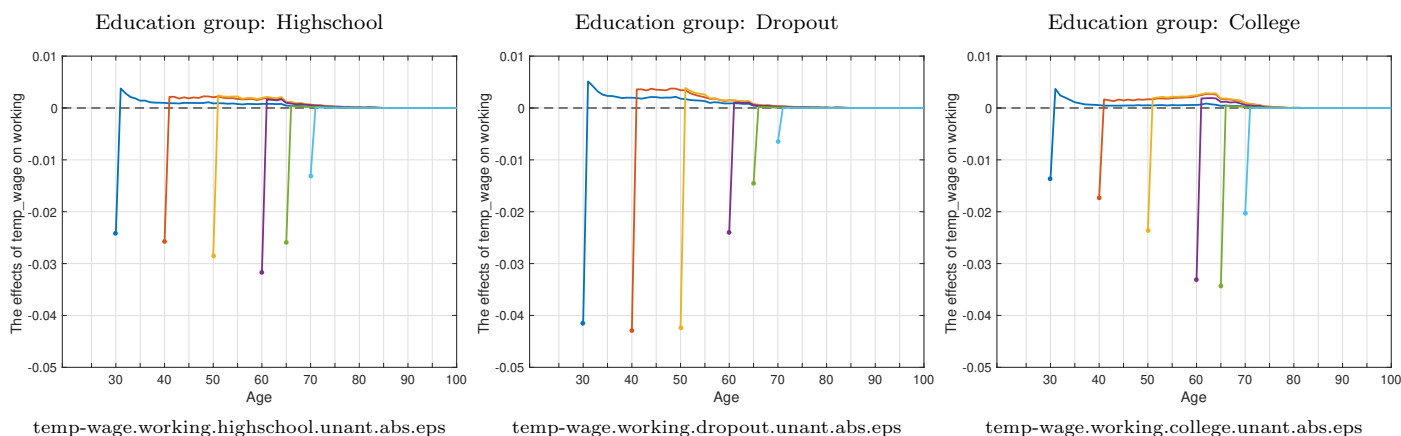


Plotted differences: Relative



4.5.2 Policy change: Unanticipated

Plotted differences: Absolute



Plotted differences: Relative

