

## Estimation results v3.0

**This version:** Results after updating the parameterization of the model and estimating discount factor distributions separately for the three education groups.

**Targets:** For each group the targets are the median LW/PI ratio and the [20,40,60,80] Lorenz Pts for that group's liquid wealth distribution.

### Dropouts

Estimated (beta, nabla) = **[0.79939338, 0.2279055]** (Estimated with 30,000 agents)

	Median LW/PI ratio	Lorenz points
Data	4.64	[0., 0.01, 0.6, 3.58]
Model	4.64	[0.0, 0.0, 0.5387, 3.5920]

### Highschool

Estimated (beta, nabla) = **[0.93744293, 0.06607694]** (Estimated with 50,000 agents)

	Median LW/PI ratio	Lorenz points
Data	30.2	[ 0.06, 0.63, 2.98, 11.6 ]
Model	30.16	[ 0.04332, 0.9496, 3.7131, 11.3065]

### College

Estimated (beta, nabla) = **[0.98525333, 0.01241598]** (Estimated with 50,000 agents)

	Median LW/PI ratio	Lorenz points
Data	112.8	[ 0.15, 0.92, 3.27, 10.3 ]
Model	112.79	[0.3221, 1.4856, 3.9947, 9.8545]

## Discount factor distributions

With the above estimates, the actual discount factor distributions we are using that are generated via the command

```
Uniform(beta-nabla, beta+nabla).approx(DiscFacCount)
```

(where `DiscFacCount` = 7 in our case)

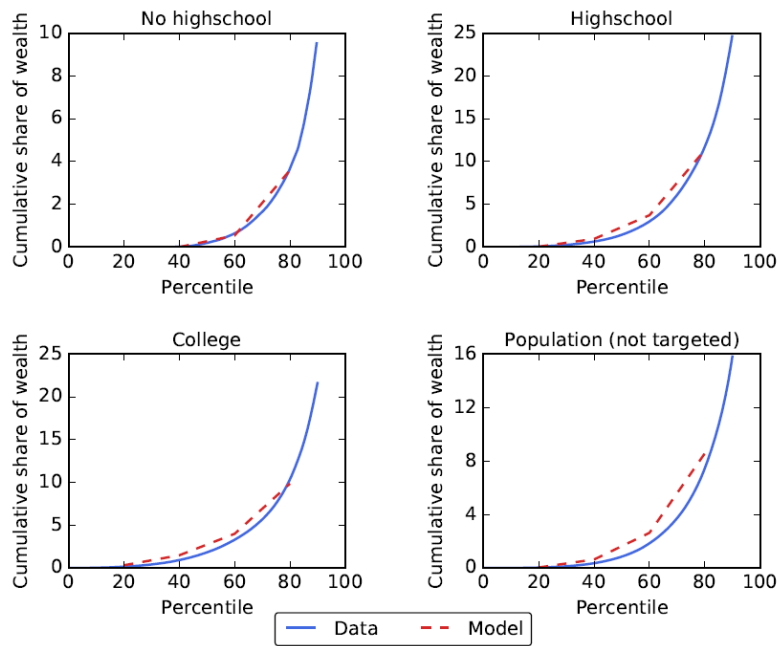
have the following end points:

```
Discount factor distribution end points:
Dropouts:      0.6040 to 0.9947
Highschool:    0.8808 to 0.9941
College:       0.9746 to 0.9959
```

## Overall population (not targeted)

With the discount factor distributions estimated for each group as above, we can calculate statistics for the overall population which were **not targeted** in the estimation.

	(Median LW/PI ratios)	Lorenz points	Wealth shares
Data	[4.64, 30.2, 112.8]	[0.03, 0.35, 1.84, 7.42]	[ 0.8, 17.9, 81.2]
Model	[4.64, 30.2, 112.5]	[0.04006, 0.6354, 2.6259, 8.5616]	[1.6, 21.2, 77.3]



### Average MPCs

With these estimates we also get the following average annual MPCs (incl. splurge in Q1) for each of the education groups:

Group	Average MPC
Droupouts	0.88
Highschool	0.79
College	0.57
Population	0.71