

Estimate Elasticities among Claimants

Results: First-Price Elasticity

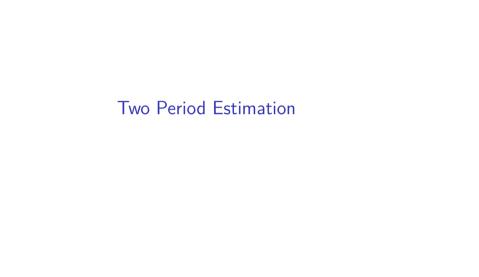
Table 1: Intensive-Margin Price Elasticity among Claimants

	Log donation
	FE
	(1)
Applicable price (β_a)	-1.147**
	(0.506)
Log income	-1.221
	(2.213)
Num.Obs.	4171

Results: Last-Price Elasticity

Table 2: Intensive-Margin Last-Price Elasticity among Claimants

	Log donation		
	FE FE-2SL		
	(1)	(2)	
Applicable last-price	-0.961* (0.517)	-1.197** (0.531)	
Log income	-1.108 (2.213)	-1.269 (2.214)	
1st stage information (Excluded F-statistics of instrument Wu-Hausman test, p-value Num Obs	d instrument: Ap	oplicable price) 40 585.827 0.019 4171	



Use 2012 and 2015 data: First-Stage

Table 3: First-Stage Models

	Effective price			
	Donors (Intensive-margin)	Donors and Non-donors (Extensive-margin)		
	(1)	(2)		
Excluded instruments				
Applicable price	0.739***	0.301***		
	(0.110)	(0.052)		
Covariates				
Log income	-0.229	-0.026		
	(0.529)	(0.190)		
Num.Obs.	2004	7671		
RMSE	0.02	0.03		

Notes: * p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors clustered at household level are in parentheses. An outcome variable is logged value of the effective price. For estimation, model (1) use donors only (intensive-margin sample), and model (2) use not only donors but also non-donors (extensive-margin sample). In addition to logged income and wage earner dummy shown in table, covariates consist of squared age (divided by 100), number of household members, a dummy that indicates having dependents, a set of dummies of industry a set of dummies of residential area, and individual and time fixed effects. Excluded instrument is a logged applicable price.

Use 2012 and 2015 data: Second-Stage

Table 4: Estimation Results of Price Elasticities

	Log donation				Dummy of donor	
	FE		FE-2SLS	FE		FE-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)
Applicable price (β_a)	-1.275 (1.276)			-0.326* (0.190)		
Effective price (eta_e^{FE})	(===; =)	-1.129 (1.601)		(0.200)	-2.757*** (0.225)	
Effective price (eta_e^{IV})		(====,	-1.725 (1.754)		(====)	-1.084* (0.574)
Log income	-3.555 (10.491)	-3.777 (10.312)	-3.951 (10.299)	2.062** (0.838)	1.550** (0.725)	2.034*** (0.761)
Implied price elasticity Estimate				-1.388* (0.808)	-11.734*** (0.958)	-4.612* (2.443)
1st stage information (Exclude F-statistics of instrument Wu-Hausman test, p-value	d instrument: A	Applicable price)	288.802			282.264
Num.Obs.	2004	2004	2004	7671	7671	7671

Notes: * p < 0.1, *** p < 0.05, *** p < 0.01. Standard errors clustered at household level are in parentheses. An outcome variable is logged value of the effective price. For estimation, model (1) use donors only (intensive-margin sample), and model

One-Year Bracket-Shifting

Take an one-year lag of applicable price

```
## # A tibble: 4 x 4
                           var shift
##
      year
                   mu
##
     <dbl>
                <dbl>
                         <dbl> <int>
                      NΑ
## 1
      2010 NaN
                                 573
## 2
      2011
            -0.00197
                       0.00195
## 3
      2012
            -0.00237
                       0.00207
                                 644
## 4
     2013
            -0.000662
                       0.00202
                                 642
```

Two-Year Bracket Shifting

Take a two-year lag of applicable price

```
## # A tibble: 4 x 4
##
                         var shift
     year
                  mu
##
     <dbl>
              <dbl>
                        <dbl> <int>
                     NA
## 1
     2010 NaN
     2011 NaN
## 2
                     NA
## 3
     2012 -0.00304 0.00233
                                559
## 4
     2013 -0.00403 0.00247
                                755
```

Three-Year Bracket Shifting

```
## # A tibble: 4 x 4
##
                     var shift
     year
                mu
##
    <dbl>
             <dbl> <dbl> <int>
## 1
     2010 NaN
                   NA
## 2
     2011 NaN
                   NA
## 3
     2012 NaN
                   NA
    2013 -0.00414 0.00238
## 4
                             492
```

How to Remove Bracket-Shifting

We remove tax-payers whose income bracket has been shifted in 2011–2013 (1477 people)

Take an one-year lag of applicable price

##	#	A tibl	ble:	8 x 4	4		
##		year		m	u	var	shift
##		<dbl></dbl>		<dbl< th=""><th>></th><th><dbl></dbl></th><th><int></int></th></dbl<>	>	<dbl></dbl>	<int></int>
##	1	2010	${\tt NaN}$		NA		0
##	2	2011	0		0		0
##	3	2012	0		0		0
##	4	2013	0		0		0
##	5	2014	-0	.0076	1 0.	00414	1128
##	6	2015	0		0		0
##	7	2016	0		0		0
##	8	2017	0		0		0

Remove Bracket-Shifting Sample in 2011–2013

Table 5: First-Stage Models

	Effective price			
	Donors (Intensive-margin)	Donors and Non-donors (Extensive-margin)		
	(1)	(2)		
Excluded instruments				
Applicable price	0.750***	0.410***		
	(0.047)	(0.031)		
Covariates				
Log income	-0.312*	-0.279***		
	(0.172)	(0.069)		
Num.Obs.	5825	21 962		
RMSE	0.04	0.04		

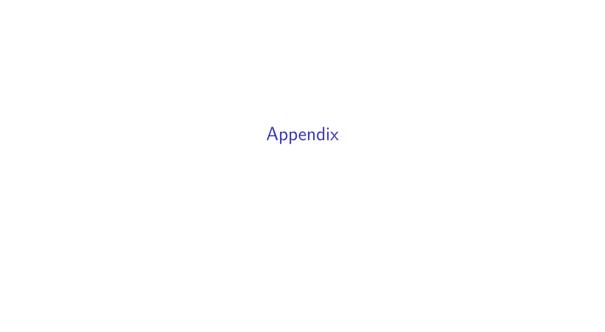
Notes: * p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors clustered at household level are in parentheses. An outcome variable is logged value of the effective price. For estimation, model (1) use donors only (intensive-margin sample), and model (2) use not only donors but also non-donors (extensive-margin sample). In addition to logged income and wage earner dummy shown in table, covariates consist of squared age (divided by 100), number of household members, a dummy that indicates having dependents, a set of dummies of industry a set of dummies of residential area, and individual and time fixed effects. Excluded instrument is a logged applicable price.

Remove Bracket-Shifting Sample in 2011–2013

Table 6: Estimation Results of Price Elasticities

	Log donation				Dummy of donor	
	F	FE FE	FE-2SLS F	E	FE-2SLS	
	(1)	(2)		(4)	(5)	(6)
Applicable price (eta_a)	-1.172*** (0.436)			-0.276*** (0.090)		
Effective price (eta_e^{FE})	(====,	$-0.670** \\ (0.320)$		(0.000)	-2.878*** (0.094)	
Effective price (eta_e^{IV})		(0.020)	-1.563*** (0.589)		(0.004)	-0.673***
Log income	2.496 (1.666)	2.258 (1.674)	2.007 (1.692)	2.046*** (0.300)	1.090*** (0.304)	1.859*** (0.286)
Implied price elasticity						
Estimate				-1.176*** (0.385)	-12.270*** (0.400)	-2.869*** (0.866)
1st stage information (Exclude	d instrument: Ap	oplicable price)				
F-statistics of instrument Wu-Hausman test, p-value			$1068.639 \\ 0.021$			1770.695 < 0.001
Num.Obs.	5825	5825	5825	21962	21962	21962

Notes: * p < 0.1, *** p < 0.05, *** p < 0.01. Standard errors clustered at household level are in parentheses. An outcome variable is logged value of the effective price. For estimation, model (1) use donors only (intensive-margin sample), and model



Full-sample analysis: Stage 1

Table 7: First-Stage Models

	Effective price			
	Donors (Intensive-margin)	Donors and Non-donors (Extensive-margin)		
	(1)	(2)		
Excluded instruments				
Applicable price	0.694***	0.299***		
	(0.038)	(0.019)		
Covariates				
Log income	-0.225	-0.071		
	(0.147)	(0.047)		
Num.Obs.	7776	30 252		
RMSE	0.05	0.04		

Notes: * p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors clustered at household level are in parentheses. An outcome variable is logged value of the effective price. For estimation, model (1) use donors only (intensive-margin sample), and model (2) use not only donors but also non-donors (extensive-margin sample). In addition to logged income and wage earner dummy shown in table, covariates consist of squared age (divided by 100), number of household members, a dummy that indicates having dependents, a set of dummies of industry a set of dummies of residential area, and individual and time fixed effects. Excluded instrument is a logged applicable price.

Full-sample analysis: Stage 2

Table 8: Estimation Results of Price Elasticities

		Log donation			Dummy of donor	
	FE		FE-2SLS	FE		FE-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)
Applicable price (β_a)	-1.082*** (0.332)			-0.184*** (0.058)		
Effective price (eta_e^{FE})	(= == ,	$-0.641** \\ (0.255)$		(-2.729*** (0.073)	
Effective price (eta_e^{IV})		(0.200)	-1.560*** (0.486)		(01010)	-0.617*** (0.182)
Log income	1.629 (1.347)	1.862 (1.334)	1.277 (1.348)	1.464*** (0.209)	0.675*** (0.190)	1.420*** (0.202)
Implied price elasticity						
Estimate				-0.791*** (0.250)	-11.717*** (0.314)	-2.647*** (0.782)
1st stage information (Excluded	d instrument: Ap	oplicable price)				
F-statistics of instrument Wu-Hausman test, p-value			$1401.509 \\ 0.004$			$1812.348 \\ < 0.001$
Num.Obs.	7776	7776	7776	30252	30252	30252

Notes: * p < 0.1, *** p < 0.05, *** p < 0.01. Standard errors clustered at household level are in parentheses. An outcome variable is logged value of the effective price. For estimation, model (1) use donors only (intensive-margin sample), and model