Online Appendix

Homeowner Preference for Household-level Flood Mitigation in US: Analysis of a Discrete Choice Experiment

Note: RPL models presented here use 200 Halton draws in the execution of maximum simulated likelihood

Table OA1: Results from the estimated compensation variation framework for flood insurance versus no flood insurance homeowners

	Buyout Contract			Elevation Contract		
	Min. WTA, Insurance	Min. WTA, No Insurance	Test for difference	Min. WTA, Insurance	Min. WTA, No Insurance	Test for difference
Before	86.76%***	117.29%***	-30.53%***	-208.96%	416.94%*	-625.9%*
	(16.9)	(16.15)	(7.79)	(156.2)	(231.83)	(371.62)
After	93.532%**	129.73%***	-36.2%**	-212.5%*	284.7%**	-497.2%**
	(29.91)	(28.87)	(13.31)	(124.41)	(138.84)	(240.26)
Test for difference	-6.77%	-12.44%		3.54%	132.19%	
	(32.84)	(32.07)		(186.53)	(233.21)	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Buyout contract (for Before and After timing) comprises the following attributes (levels): Sell both house and lot (1); Acquisition pay period (365 days); Vacate (60 days). Home elevation contract: Elevation cost (30%); Insurance appreciation (30%). Replication based on 1,283 clusters in id.

Table OA2: Results from the estimated compensation variation framework for homeowners in 100-year floodplain or Special flood hazard Area (SFHA) versus those outside 100-year floodplain (non-SFHA)

	Buyout Contract			Elevation Contract		
	Min. WTA, SFHA	Min. WTA, non-SFHA	Test for difference	Min. WTA, SFHA	Min. WTA, non-SFHA	Test for difference
Before	121.78%***	106.39%***	15.4%*	- 40.27%	118.5%**	-78.23%
	(17.12)	(16.04)	(8.73)	(27.58)	(54.63)	(60.79)
After	125.72%**	121.41%***	4.3%	-7.69%	126.52%	-134.21%
	(27.83)	(25.7)	(13.97)	(46.48)	(89.24)	(104.53)
Test for difference	-3.93%	-15.03%		47.96%	-8.03%	
	(29.58)	(28.64)		(42.14)	(60.05)	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Buyout contract (for Before and After timing) comprises the following attributes (levels): Sell both house and lot (1); Acquisition pay period (365 days); Vacate (60 days). Home elevation contract: Elevation cost (30%); Insurance appreciation (30%). Replication based on 1,201 clusters in id.

Table OA3: Results from the estimated compensation variation framework for homeowners with flood damage experience versus those with no damage experience

	Buyout Contract			Elevation Contract		
	Min. WTA, Damage	Min. WTA, No damage	Test for difference	Min. WTA, Damage	Min. WTA, No damage	Test for difference
Before	93.39%***	111.99%***	-18.6%**	-72.88%*	143.5%**	-216.4%**
	(20.78)	(19.91)	(7.91)	(38.63)	(59.07)	(84.87)
After	91.76%***	131.75%***	-39.97%**	-170.1%**	159.7%**	-329.8%**
	(29.75)	(30.05)	(15.77)	(67.13)	(68.9)	(105.74)
Test for difference	1.62%	-19.76%		97.2%	-16.21%	
	(37.69)	(38.98)		(77.93)	(45.12)	

Standard errors in parentheses

*** p<0.01, ** p<0.05

Buyout contract (for Before and After timing) comprises the following attributes (levels): Sell both house and lot (1); Acquisition pay period (365 days); Vacate (60 days). Home elevation contract: Elevation cost (30%); Insurance appreciation (30%). Replication based on 1,283 clusters in id.

Table OA4: Results from the estimated compensation variation framework for White versus non-White homeowners

	Buyout Contract			Elevation Contract		
	Min. WTA, White	Min. WTA, non-White	Test for difference	Min. WTA, White	Min. WTA, non-White	Test for difference
Before	107.8%***	84.5%***	23.3%**	37.8%**	12.4%**	25.4%**
	(16.3)	(17.6)	(6.57)	(12.8)	(42.98)	(41.8)
After	127.9%***	90.1%***	37.7%**	14.0%	-20.7%	34.7%
	(23.9)	(26.3)	(14.95)	(22.7)	(70.1)	(66.2)
Test for difference	-20.1%	-5.6%		23.8%	33.1%	
	(27.3)	(29.1)		(22.9)	(41.2)	

Standard errors in parentheses

*** p<0.01, ** p<0.05

Buyout contract (for Before and After timing) comprises the following attributes (levels): Sell both house and lot (1); Acquisition pay period (365 days); Vacate (60 days). Home elevation contract: Elevation cost (30%); Insurance appreciation (30%). Replication based on 1,283 clusters in id.

Table OA5: Results from the estimated compensation variation framework for homeowners with bachelor's degree or higher versus those with less than bachelor's degree

	Buyout Contract			Elevation Contract		
	Min. WTA, Bachelor or Higher	Min. WTA, Less than Bachelor	Test for difference	Min. WTA, Bachelor or Higher	Min.WTA, Less than Bachelor	Test for difference
Before	96.56%***	109.71%***	-13.15%*	-8.56%	105.4%**	-113.95%**
	(16.77)	(16.64)	(6.57)	(18.82)	(39.95)	(43.06)
After	116.49%**	122.05%***	-5.56%	-57.7%	126.39%*	-184.1%**
	(25.38)	(25.2)	(9.92)	(42.68)	(72.16)	(88.26)
Test for difference	-19.93%	-12.34%		49.13%	-21.01%	
	(28.58)	(28.30)		(44.33)	(44.78)	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Buyout contract (for Before and After timing) comprises the following attributes (levels): Sell both house and lot (1); Acquisition pay period (365 days); Vacate (60 days). Home elevation contract: Elevation cost (30%); Insurance appreciation (30%). Replication based on 1,283 clusters in id.

Table OA6: Results from the estimated compensation variation framework for homeowners with strong connection to place versus those with weak connection to place

	Buyout Contract			Elevation Contract		
	Min. WTA, Strong connection to place	Min. WTA, Weak connection to place	Test for difference	Min. WTA, Strong connection to place	Min.WTA, Weak connection to place	Test for difference
Before	112.2%***	100.47%***	11.70%	10.16%	84.97%**	-74.8%*
	(17.1)	(16.53)	(7.18)	(17.5)	(39.6)	(41.4)
After	129.4%***	112.5%***	16.91%	-191.28%	211.8%	-403.08%
	(27.72)	(26.19)	(11.44)	(230.68)	(226.3)	(408.49)
Test for difference	-17.2%	-12.03%		201.44%	-126.83%	
	(29.84)	(28.76)		(229)	(204.2)	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Buyout contract (for Before and After timing) comprises the following attributes (levels): Sell both house and lot (1); Acquisition pay period (365 days); Vacate (60 days). Home elevation contract: Elevation cost (30%); Insurance appreciation (30%). Replication based on 1,283 clusters in id.

Table OA7: Results from the estimated compensation variation framework for low versus high income homeowners

	Buyout Contract			
	Min. WTA All sample	Min. WTA, Low Income	Min. WTA, High Income	Test for difference
Before	102.82%***	-9.7%	-33.9%	24.9%**
	(16.9)	(21.9)	(22.7)	(10.17)
After	118.49%***	17.19%	13.86%	3.32%
	(25.29)	(34.5)	(35.52)	(14.2)
Test for difference	-15.66%	-26.8%	-47.8%	
	(29.24)	(38.04)	(38.26)	
	Elevation Contract			
Before	1.6%	84.5%**	54.43%	30.02%
	18.78	32.04	49.05	45.3
After	-174.5%	161.6%	147.49%	14.11%
	199.69	159.98	220.0	(187.19)
Test for difference	176.13%	-77.16%	-93.05%	
	(197.64)	(159.7)	(189.31)	

Standard errors in parentheses

*** p<0.01, ** p<0.05

Buyout contract (for Before and After timing) comprises the following attributes (levels): Sell both house and lot (1); Acquisition pay period (365 days); Vacate (60 days). Home elevation contract: Elevation cost (30%); Insurance appreciation (30%). Replication based on 1,283 clusters in id.

Table OA_8: Exploring Nonlinear Effects for Acquisition Pay Period

Variable	Conditional Logit	Conditional Logit	Conditional Logit	Conditional Logit
	Before	After	Before	After
Price	0.0186***	0.0111***	0.0187***	0.0105***
	(0.0023)	(0.0022)	(0.0024)	(0.0023)
Sell both house and lot	0.1850**	0.2240***	0.1803**	0.2442***
	(0.0808)	(0.0789)	(0.0832)	(0.0811)
Acquisition pay period	-0.0004	-0.0034	-0.0055	0.0184
	(0.0046)	(0.0047)	(0.0182)	(0.0183)
(Acquisition pay period)^2	-0.00002	-0.00000	-0.00008	-0.0004
	(0.00003)	(0.00003)	(0.0003)	(0.0003)
(Acquisition pay period)^3			-0.00000	0.00000
			(0.00000)	(0.00000)
Vacate	0.0034***	0.0043***	0.0033***	0.0048***
	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Elevation cost	-0.0154***	-0.0037	-0.0152***	-0.0045
	(0.0043)	(0.0043)	(0.0043)	(0.0043)
Elevation subsidy	0.0110***	0.0065***	0.0109***	0.0070***
	(0.0019)	(0.0019)	(0.0019)	(0.0019)
Insurance appreciation	-0.0029	-0.0011	-0.0029	-0.0012
	(0.0020)	(0.0021)	(0.0020)	(0.0021)
Buyout	-1.6291***	-0.4620	-1.5718***	-0.7025*
	(0.3289)	(0.3372)	(0.3711)	(0.3765)
Elevation	-0.0745	0.0746	-0.0740	0.0696
	(0.1882)	(0.1842)	(0.1883)	(0.1836)
Log pseudolikelihood	-5140.1593		-5139.4810	
Observations (Cluster id)	15,384 (1,283)		15,384 (1,283)	

Robust standard errors in parentheses, clustered at the respondent level. *** p<0.01, ** p<0.05, * p<0.1

Table OA_9: Nonlinear effects of Pay Period using Dummy Variables

Variable	Conditional Logit	Mixed Logit	
	Coefficient	Mean	SD
(Acquisition pay period = 45) ×	-0.0635	-0.225	-0.370
Before	(0.104)	(0.232)	(1.890)
(Acquisition pay period = 75) ×	-0.105	-0.410	0.863
Before	(0.120)	(0.264)	(1.192)
(Acquisition pay period = 120) ×	-0.304***	-0.364	-2.887
Before	(0.106)	(0.267)	(2.059)
(Acquisition pay period = 45) ×	-0.0220	-0.0764	2.285
After	(0.104)	(0.342)	(5.154)
(Acquisition pay period = 75) ×	-0.279**	-0.676	-2.050
After	(0.120)	(1.187)	(5.602)
(Acquisition pay period = 120) ×	-0.336***	-0.765	3.184
After	(0.104)	(1.295)	(6.599)
Including all other attributes?	Yes	Yes	

Robust standard errors in parentheses, clustered at the respondent level. *** p<0.01, ** p<0.05, * p<0.1

Hypothesis tests for nonlinear effects of Acquisition Pay Period from Table OA9

Before Damage, Mixed Logit

H0: Linear utility between 45 and 75 days (p value = 0.3026)

H0: Linear utility between 45 and 120 days (p value = 0.2739)

H0: Linear utility between 75 and 120 days (p value = 0.9130)

After Damage, Mixed Logit

H0: Linear utility between 45 and 75 days (p value = 0.1827)

H0: Linear utility between 45 and 120 days (p value = 0.3814)

H0: Linear utility between 75 and 120 days (p value = 0.3665)

Before Damage, Conditional Logit

H0: Linear utility between 45 and 75 days (p value = 0.9105)

H0: Linear utility between 45 and 120 days (p value = 0.7334)

H0: Linear utility between 75 and 120 days (p value = 0.4429)

After Damage, Conditional Logit

H0: Linear utility between 45 and 75 days (p value = 0.2428)

H0: Linear utility between 45 and 120 days (p value = 0.3911)

H0: Linear utility between 75 and 120 days (p value = 0.5703)