Public Perceptions of the Linkage between Monetary Policy Decisions and the Housing Market

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Introduction and Motivation

What is the *perceived* nexus between monetary policy and house prices?

1) The connection between **monetary policy and housing markets** has been under scrutiny since the great financial crisis

- Theory suggests: $\downarrow$ interest rates $\rightarrow \downarrow$ cost of borrowing $\rightarrow \downarrow$ credit contraints $\rightarrow \uparrow$ demand for housing $\rightarrow \uparrow$ house prices (Hedlund et al. 2017)
- Empirics corroborate: $\downarrow$ policy rates $\rightarrow \uparrow$ increases in mortgage loans and $\uparrow$ house prices (Jordà et al. 2015)

Introduction and Motivation

What is the *perceived* nexus between monetary policy and house prices?

2) How is this relationship **perceived by the public**?

- The interaction between the actual conduct of monetary policy (MP) and agents' understanding of it shapes the economy (Eusepi & Preston 2010)
- Households are at least partly aware of the basic principles underlying monetary policy (Carvalho & Nechio 2014)
- What is perceived about the particular effect of MP on house prices is less known

Introduction and Motivation

This paper is about peoples' perception about monetary policy and house prices

- Interactive web-based survey experiment with about 1,100 participants
- Participant pool: Luxembourg residents who participated in EU-SILC or recruited via social media
- Survey period: 02-05/2022
- Possibility to gain up to 50 EUR in vouchers

Do people understand monetary policy?

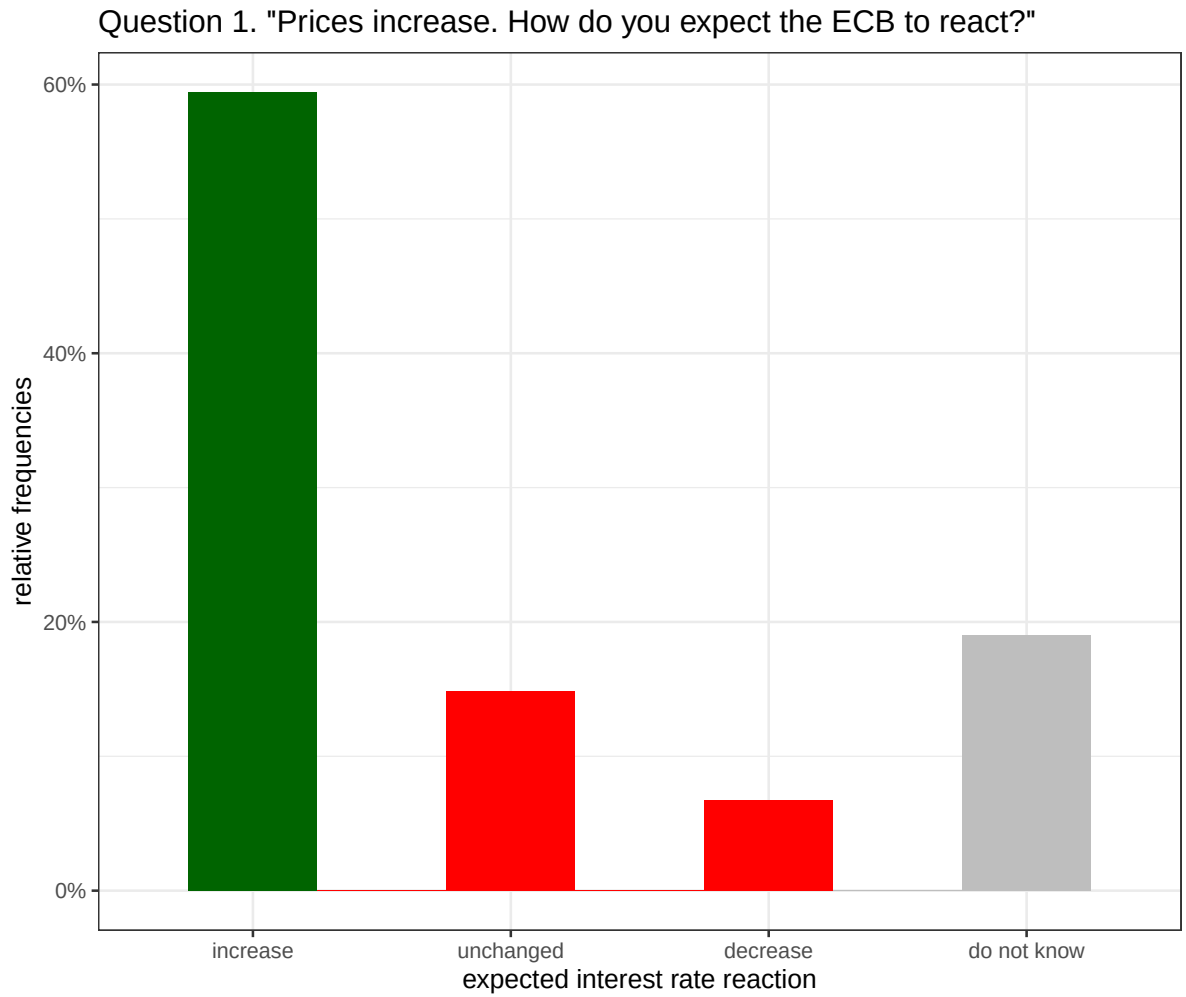
Question 1: what do people think about monetary policy in general?

The European Central Bank (ECB) together with national central banks decides upon the key policy interest rate, which affects the interest rates people have to pay when taking out mortgages. Suppose the prices in the Eurozone in general will go up in the next 12 months. How do you expect the ECB to react?

1. **The ECB will increase their interest rate.**
2. The ECB will leave their interest rate unchanged.
3. The ECB will decrease their interest rate.
4. I do not know.

Do people understand monetary policy?

Question 1: What do people think about conventional monetary policy?



Counts

Do people understand monetary policy?

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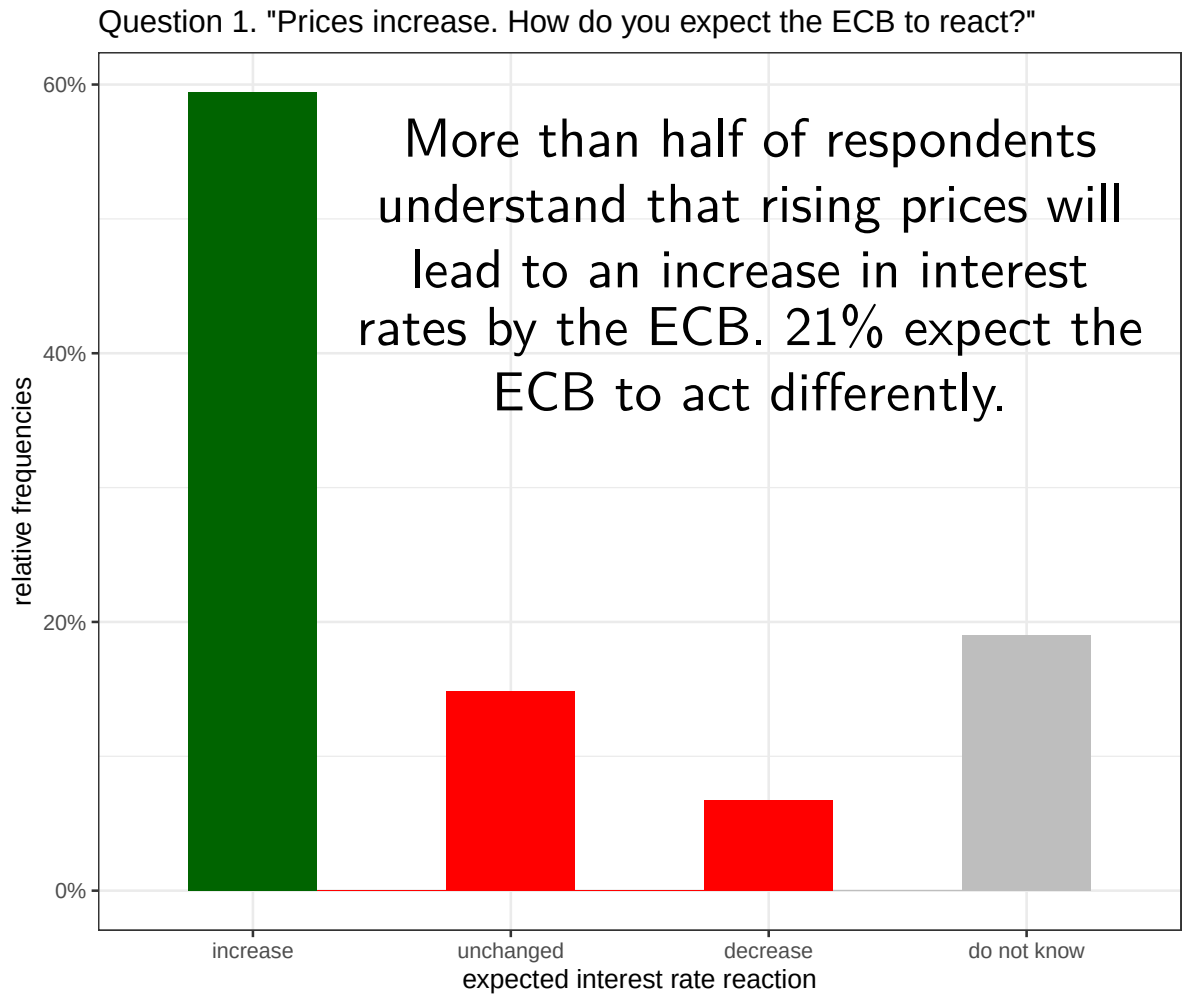


Counts

Do people understand monetary policy?

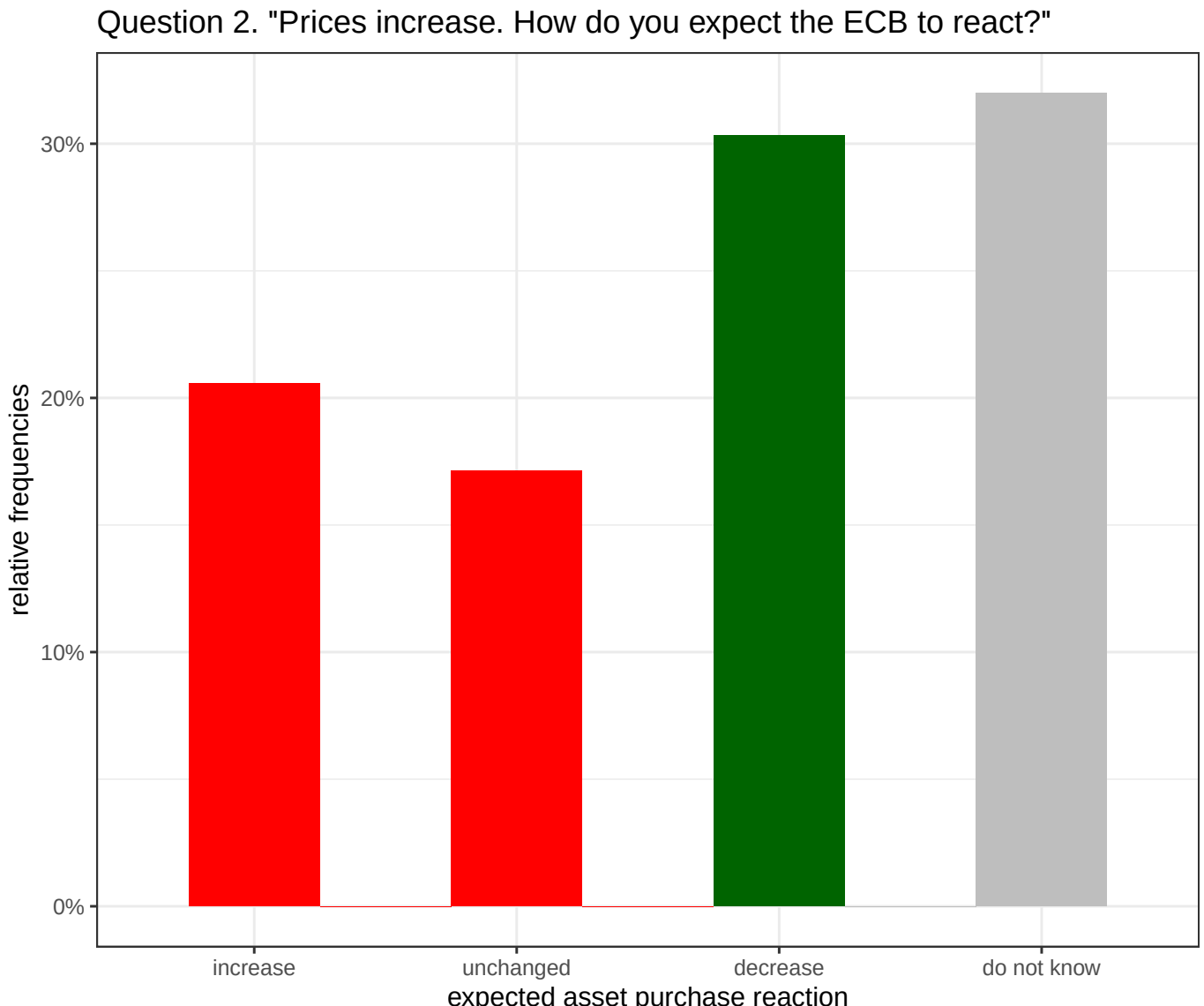
Question 2: What do people think about unconventional monetary policy?

Besides fixing the interest rate, the ECB also bought a range of financial assets, including government bonds and corporate bonds. Such purchases influence broader financial conditions and, possibly, inflation. Assume, again, that prices in the Eurozone in general increase over the next 12 months. How do you think the ECB will react?

1. The ECB will purchase more assets.
2. The ECB will not change its asset purchase programme.
3. **The ECB will purchase less assets.**
4. I do not know.

Do people understand monetary policy?

Question 2: What do people think about unconventional monetary policy?



Do people understand monetary policy?

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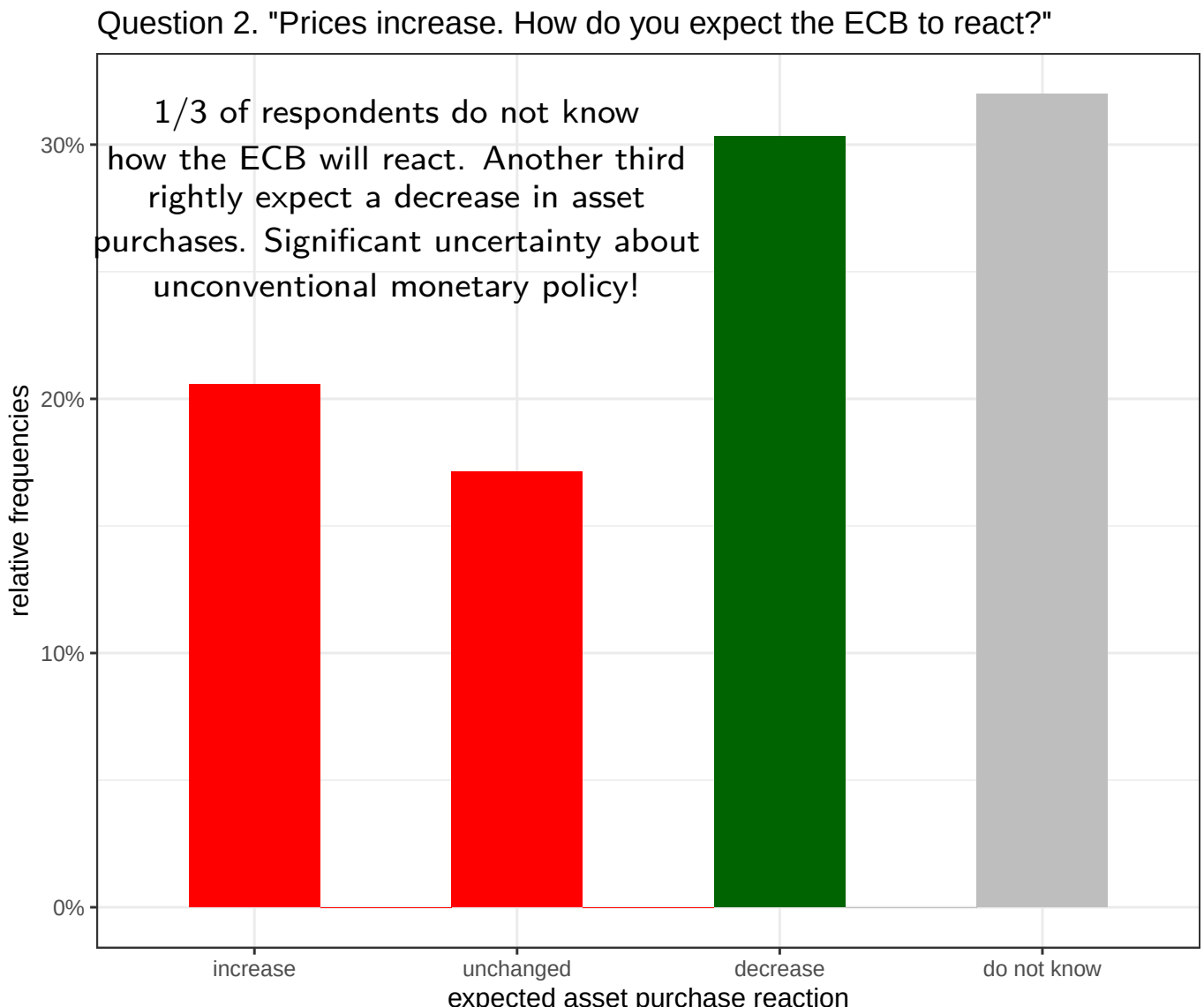
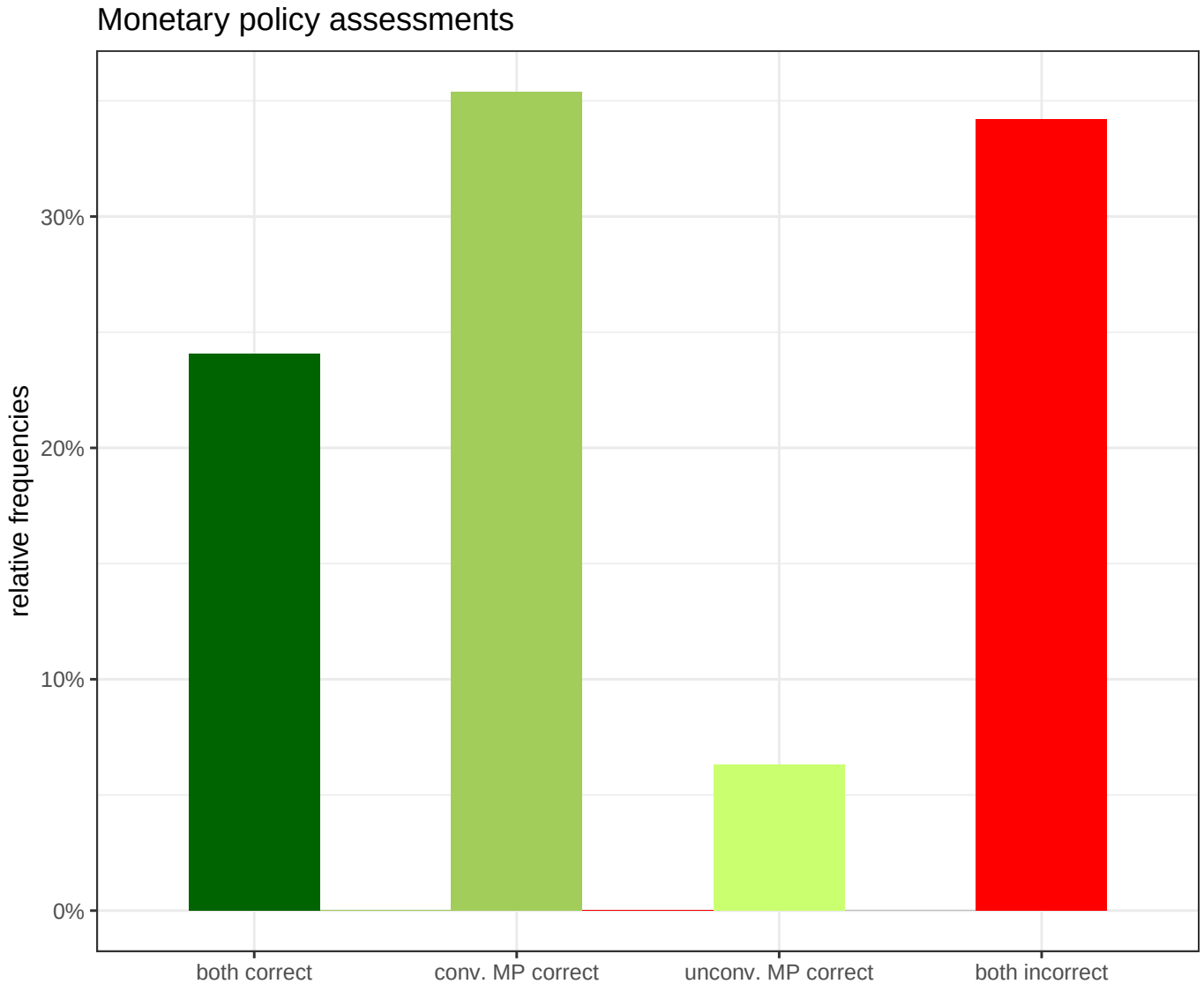


Do people understand monetary policy?



Do people understand monetary policy?

Probability of expecting the correct monetary policy reaction to inflation:

	Dependent variable:	
	trueECBQ1	trueECBQ2
	(1)	(2)
sex	0.323***	0.263***
	(0.092)	(0.097)
age	−0.003	−0.002
	(0.005)	(0.005)
In a partnership	0.160	−0.278
	(0.159)	(0.170)
Married or PACS	0.065	−0.013
	(0.134)	(0.140)
Widowed	−0.991*	−4.516
	(0.585)	(117.841)
Divorced	−0.071	−0.478*
	(0.226)	(0.260)
children	−0.111	0.115
	(0.118)	(0.122)
job_loss	−0.002	0.005
	(0.023)	(0.025)
life_satisfaction	−0.001	0.022
	(0.025)	(0.027)
LUX born	−0.399***	−0.177
	(0.107)	(0.113)
high education	0.236**	0.423***
	(0.114)	(0.129)
vote	−0.096	0.050
	(0.133)	(0.137)
income quantile 2	−0.017	−0.064
	(0.144)	(0.164)
income quantile 3	0.144	0.153
	(0.148)	(0.163)
income quantile 4	0.241	0.272
	(0.154)	(0.165)
income quantile 5	0.485***	0.595***
	(0.165)	(0.171)
risk measure	−0.132	0.151
	(0.094)	(0.099)
Constant	−0.003	−1.696***
	(0.451)	(0.479)
Observations	810	808
Log Likelihood	-507.575	-451.816
McFaddens Pseudo R-Squared	0.071	0.089
Note:	*p<0.1; **p<0.05; ***p<0.01	

→ women and highly educated have better understanding of conventional and unconventional MP
Those born in LUX worse understanding of conventional MP
→ high correlation between understanding of conventional and unconventional MP

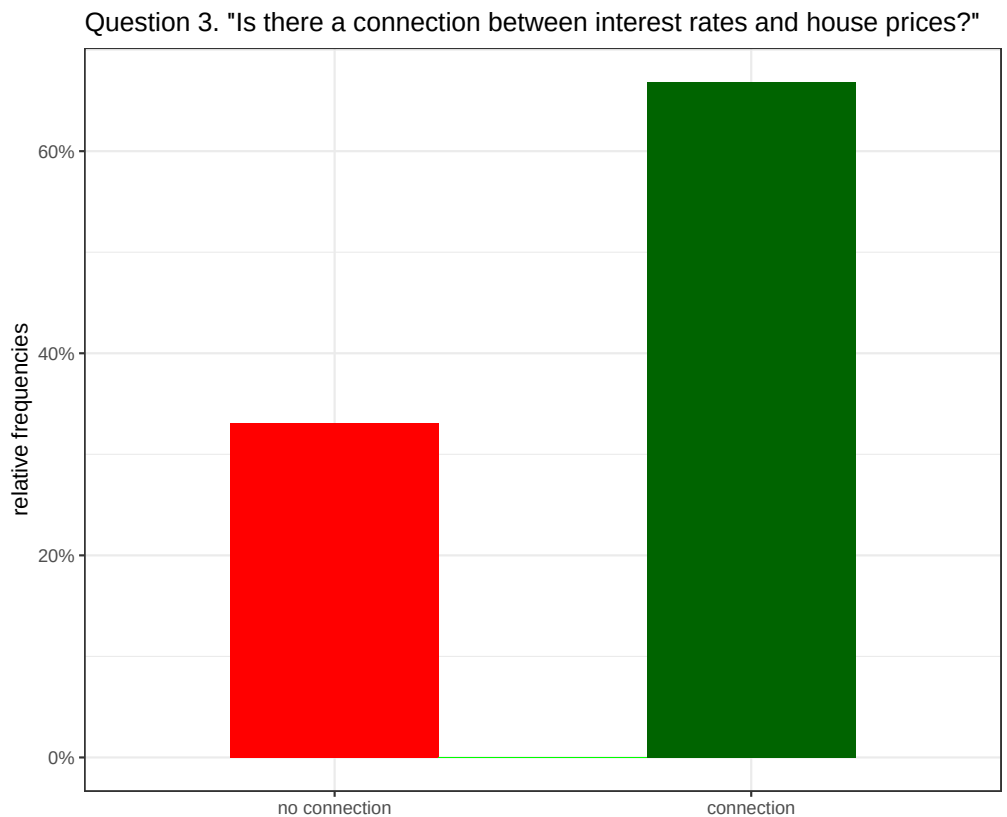
UMP relatively recent phenomenon (Inflation targeting since 1990s, UMP since 2010)

Reis (2022): "Central banks can enjoy a "capital of inattention" in that people do not pay much attention to what the central bank is doing, trusting it will deliver inflation on target over the next few years."

Connection between interest rates and house prices

Question 3:

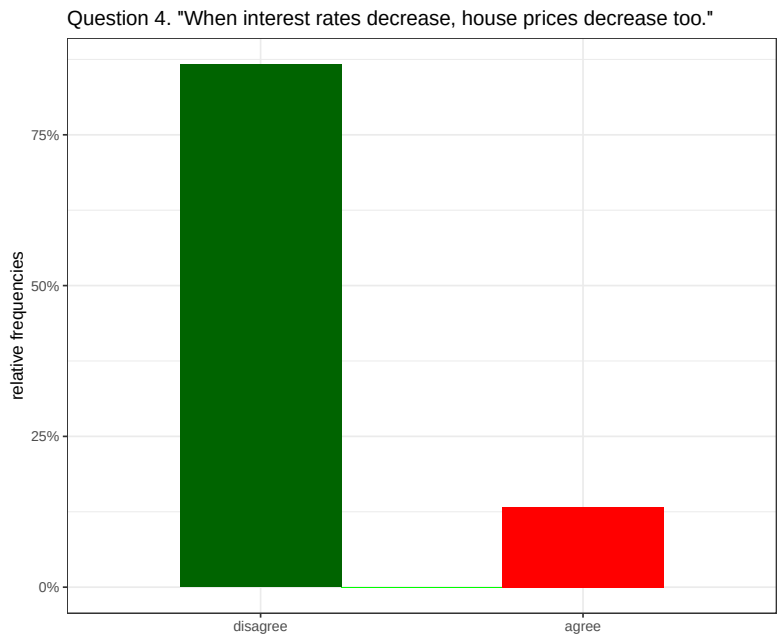
There is a connection between interest rates I have to pay to credit institutes when taking out a mortgage, and the price of houses/apartments.

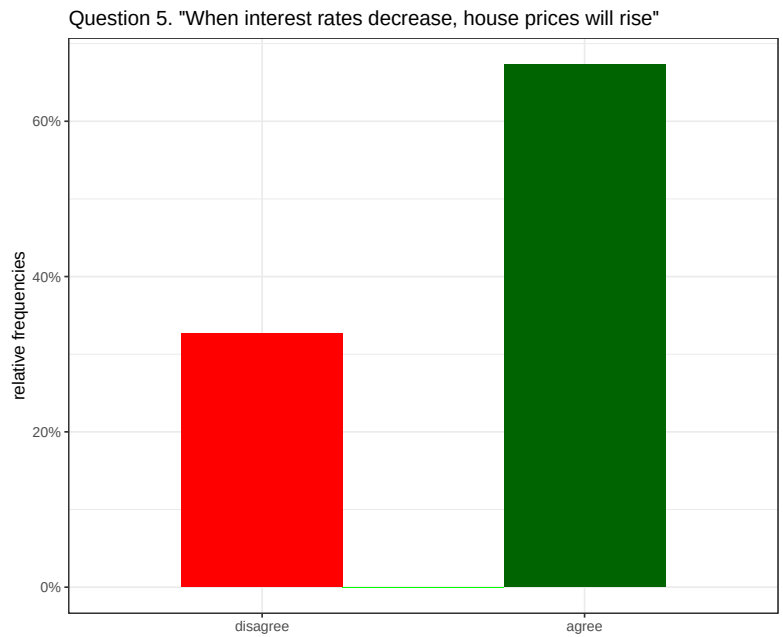


Interest rates and house prices - direction

Q4: When the interest rate decreases, house prices decrease too.

Q5: When the interest rate decreases, house prices rise.





Communication

- (Central bank) communication can shape household expectations (Coibion et al. 2022, Hoffmann et al. 2021)
- Can information about the monetary policy-house price nexus shape households expectations?
- We combine randomized information treatments to study how different types of communications affect expectations
- Questions are asked again, but enhanced with information by researchers or a central banker

Communication

Question 5 - central banker treatment:

There are central bankers arguing that when interest rates fall, house prices will rise. For example, Deputy Governor Chen Nan-kuang of Taiwan's central bank states that "loose monetary policy [note: meaning low interest rates] is indeed one of the main reasons for rising house prices". (Source: The Taiwan Banker NO.145)
In the light of this claim, we will present you the last two statements again. Do you rather agree or disagree?
When the interest rate decreases, house prices will decrease too.
1 disagree, 2 agree

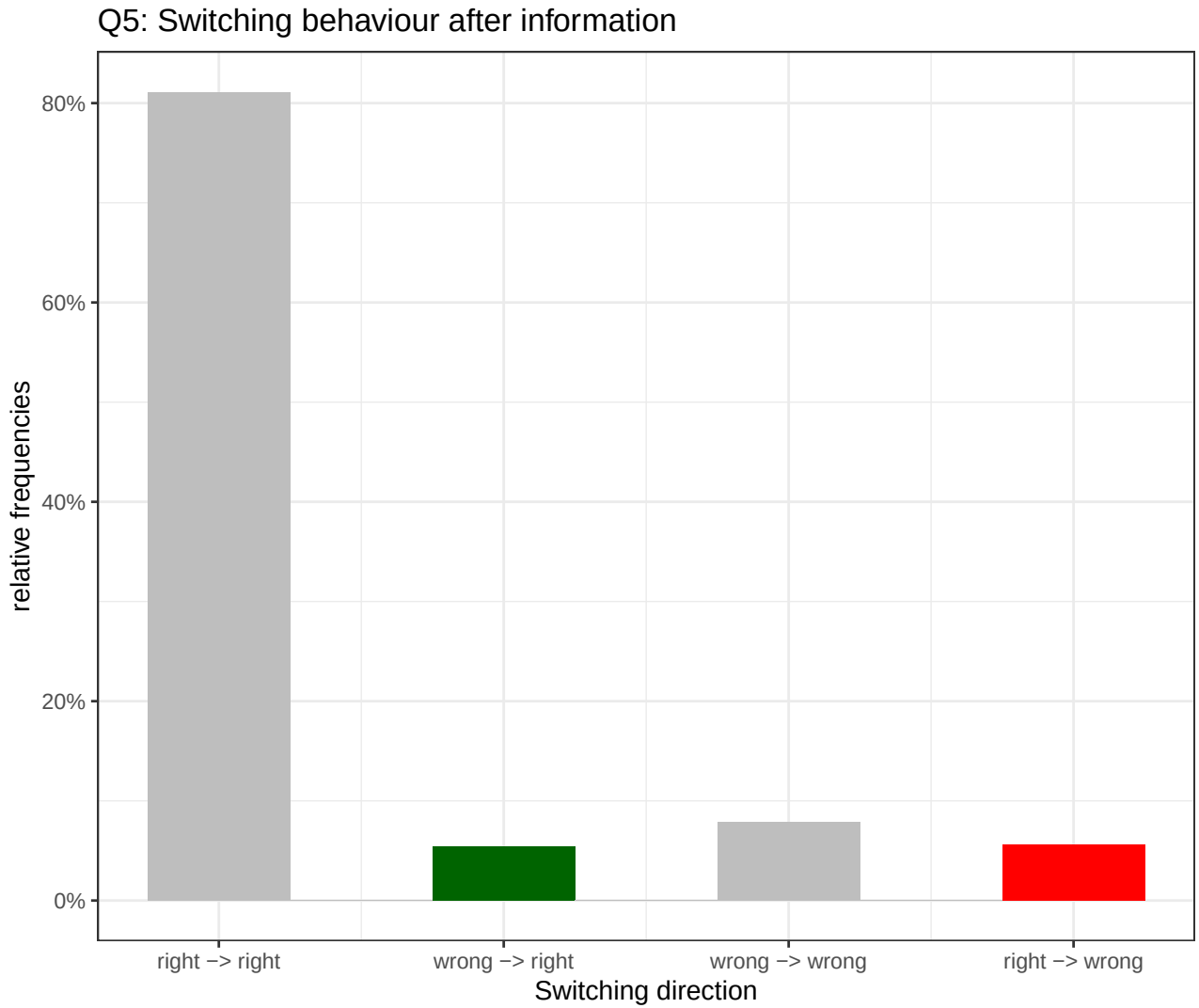
Communication

Question 6 - researcher treatment:

There are researchers arguing that when interest rates fall, house prices will rise. For example, Ozkan at the University of Toronto and his coauthors state that a "reduction in the interest rate reduces the cost of borrowing, alleviates credit constraints and increases the demand for housing. The increase in demand for housing increases real house prices." (Source: Ozkan et al. 2017)
In the light of this claim, we will present you the last two statements again. Do you rather agree or disagree?
When the interest rate decreases, house prices will decrease too.
1 disagree, 2 agree

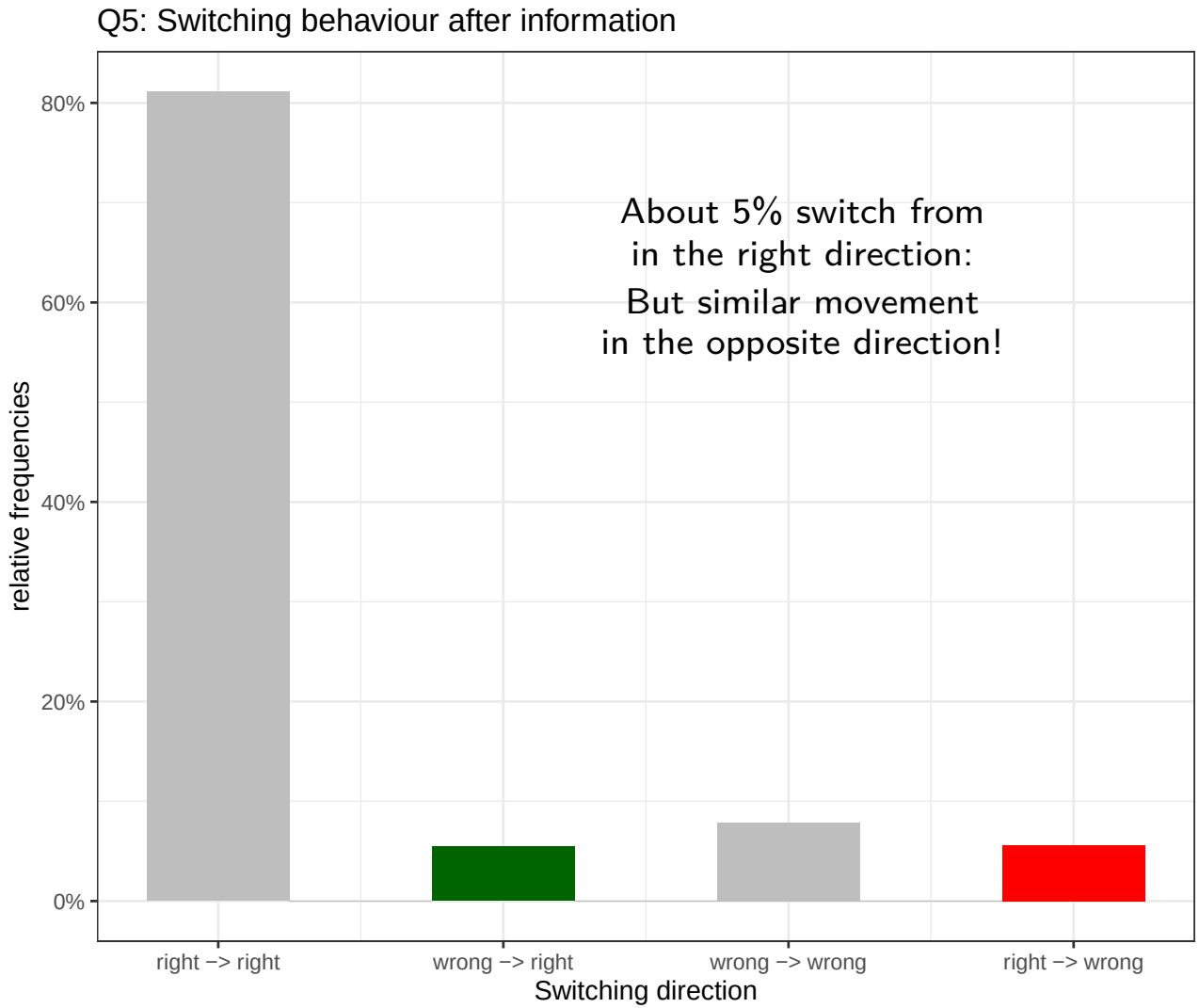
In the information the respondents were provided, both economists and central bankers argued that if interest rates decrease, house prices will most likely increase.

Switching behaviour - aggregate

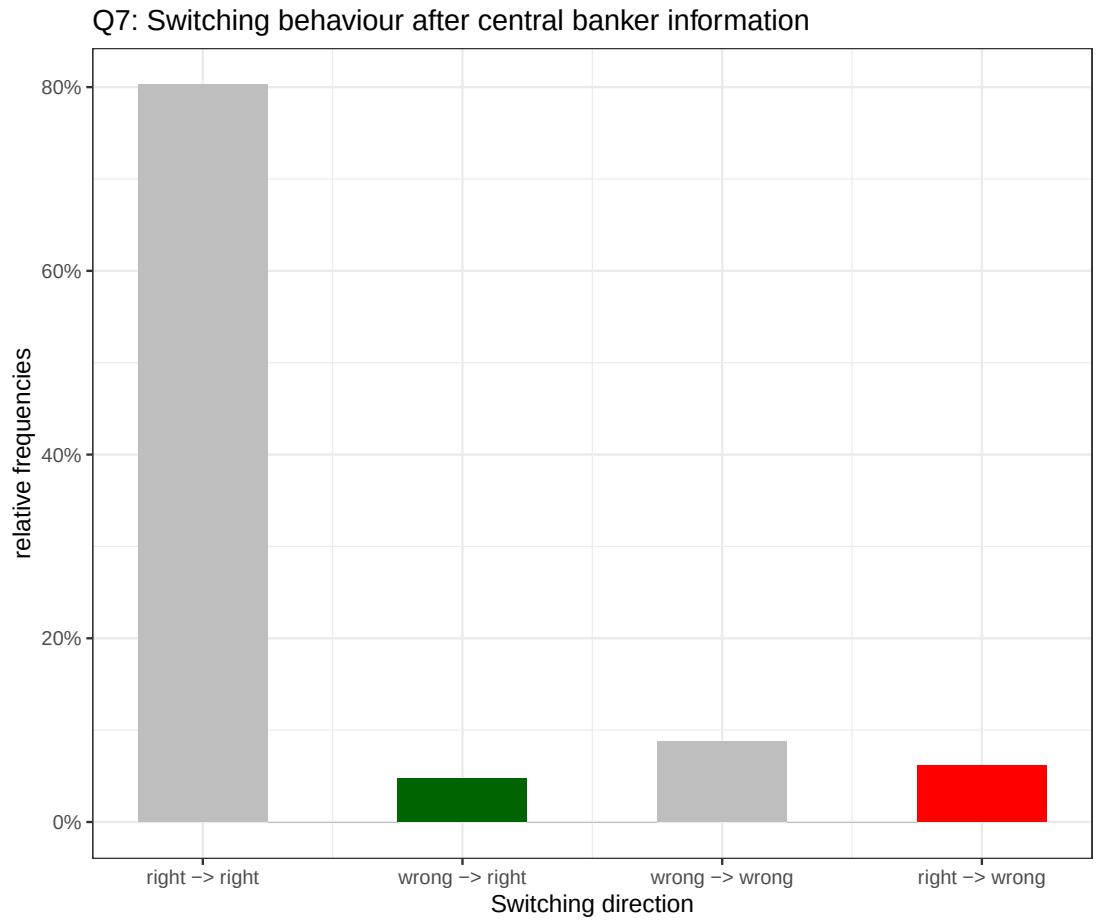


Mirrored question

Switching behaviour - aggregate

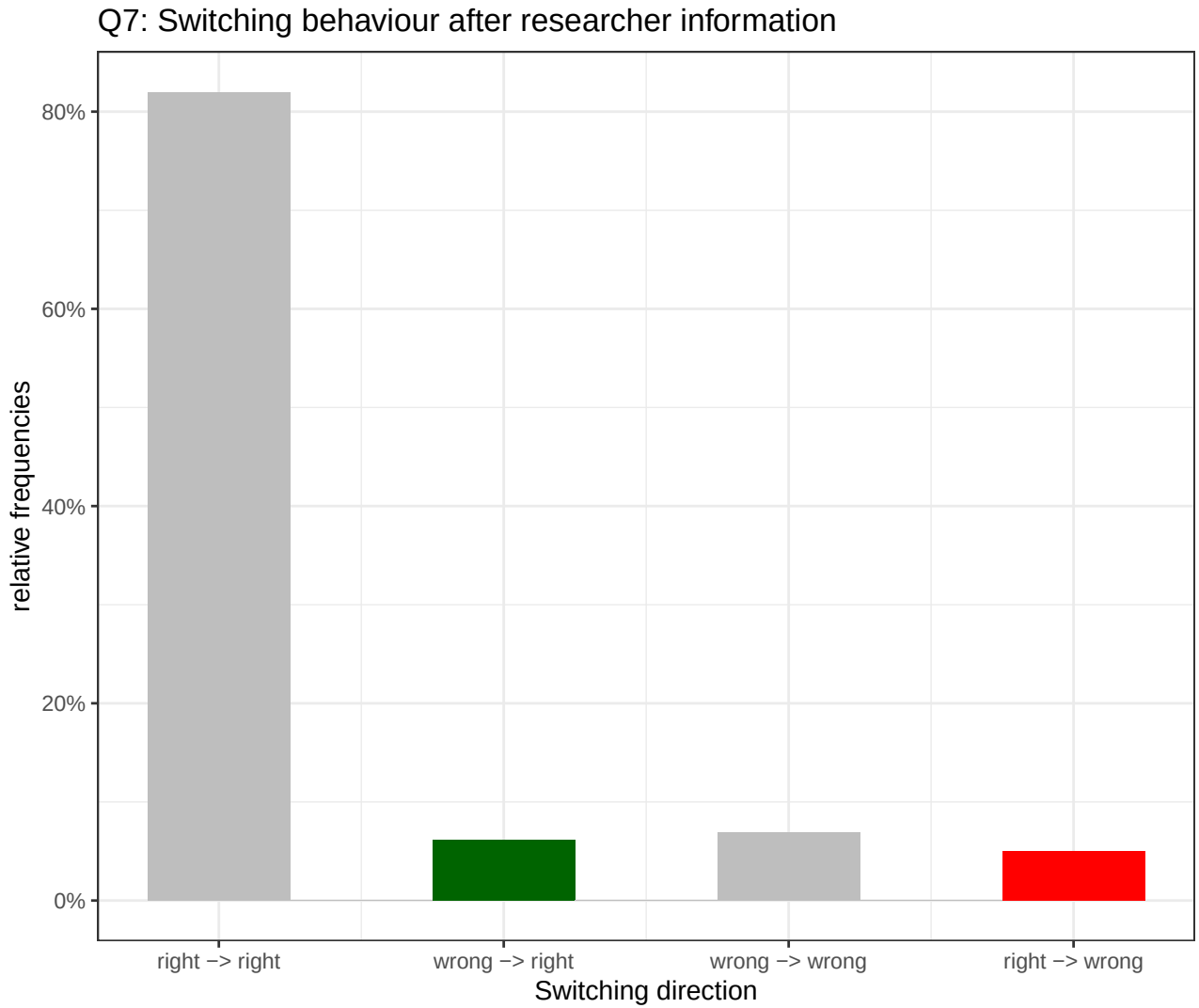


Switching behaviour - central banker information



Mirrored question

Switching behaviour - researcher information



Mirrored question

Switching behaviour

A probit estimation:

	Dependent variable:			
	right → right	wrong → right	wrong → wrong	right → wrong
random_monetary	0.050	0.197	−0.158	−0.129
	(0.108)	(0.158)	(0.141)	(0.151)
sex	−0.153	0.085	0.173	0.046
	(0.107)	(0.154)	(0.139)	(0.148)
age	0.009*	−0.008	−0.015**	0.003
	(0.006)	(0.008)	(0.008)	(0.007)
In a partnership	−0.219	0.242	0.075	0.211
	(0.182)	(0.278)	(0.228)	(0.253)
Married or PACS	−0.172	0.371	−0.020	0.108
	(0.158)	(0.239)	(0.201)	(0.223)
Widowed	−0.628	1.250*	−3.455	0.401
	(0.523)	(0.658)	(122.087)	(0.648)
Divorced	−0.369	0.836**	0.159	−0.188
	(0.261)	(0.355)	(0.340)	(0.410)
children	0.015	0.176	−0.087	−0.106
	(0.139)	(0.196)	(0.187)	(0.193)
job_loss	−0.073***	0.046	0.067**	0.034
	(0.024)	(0.033)	(0.028)	(0.033)
life_satisfaction	0.0003	−0.016	0.029	−0.022
	(0.028)	(0.040)	(0.036)	(0.039)
LUX born	−0.066	−0.162	0.025	0.219
	(0.124)	(0.191)	(0.161)	(0.167)
high education	0.200	−0.172	−0.476***	0.333*
	(0.129)	(0.187)	(0.162)	(0.192)
vote	−0.143	0.449**	−0.020	−0.275
	(0.153)	(0.199)	(0.204)	(0.250)
income quantile 2	0.241	−0.442*	−0.108	0.110
	(0.157)	(0.238)	(0.189)	(0.227)
income quantile 3	0.284*	−0.115	−0.477**	0.102
	(0.165)	(0.229)	(0.222)	(0.230)
income quantile 4	0.346**	−0.098	−0.323	−0.214
	(0.174)	(0.243)	(0.227)	(0.256)
income quantile 5	0.785***	−0.628**	−0.739***	−0.396
	(0.204)	(0.312)	(0.286)	(0.286)
risk measure	0.325***	−0.313*	−0.134	−0.265*
	(0.109)	(0.160)	(0.143)	(0.153)
Constant	0.575	−2.298***	−0.445	−1.336*
	(0.555)	(0.805)	(0.728)	(0.780)
Observations	812	812	812	812
McFaddens Pseudo R^2	0.085	0.099	0.113	0.052
Note:				*p<0.1; **p<0.05; ***p<0.01

Mirrored question

- The type of information does not matter for switching behaviour
- Divorced respondents and those who voted in the last election are more likely to be "good switchers"
- Respondents with lower education and and those who expect to lose their jobs soon are likely to stay wrong

Switching behaviour

Multinomial logit, with *right→right* as baseline:

	Dependent variable:		
	wrong → right	wrong → wrong	right → wrong
trueECBQ1	0.256	−0.465	−0.686**
	(0.352)	(0.291)	(0.336)
trueECBQ2	−1.072**	−1.083**	−0.281
	(0.473)	(0.432)	(0.397)
random_monetary	0.346	−0.315	−0.331
	(0.336)	(0.284)	(0.323)
sex	0.270	0.379	0.291
	(0.334)	(0.279)	(0.310)
age	−0.025	−0.033**	0.004
	(0.019)	(0.016)	(0.016)
In a partnership	0.500	0.132	0.519
	(0.592)	(0.453)	(0.547)
Married or PACS	0.800	0.047	0.350
	(0.512)	(0.403)	(0.482)
Widowed	2.673**	−10.245***	0.799
	(1.355)	(0.00001)	(1.275)
Divorced	1.762**	0.384	−0.149
	(0.744)	(0.670)	(0.887)
children	0.398	−0.115	−0.203
	(0.419)	(0.383)	(0.407)
job_loss	0.122*	0.150***	0.099
	(0.067)	(0.053)	(0.070)
life_satisfaction	−0.038	0.049	−0.044
	(0.083)	(0.071)	(0.083)
I(country_birth_har == "LU")	−0.305	−0.003	0.284
	(0.411)	(0.323)	(0.354)
factor(edu)2	−0.433	−0.774**	0.626
	(0.389)	(0.322)	(0.414)
vote	0.929**	0.104	−0.588
	(0.407)	(0.410)	(0.572)
factor(earningsquantile)2	−1.053**	−0.346	0.091
	(0.500)	(0.367)	(0.479)
factor(earningsquantile)3	−0.497	−0.953**	0.106
	(0.480)	(0.459)	(0.481)
factor(earningsquantile)4	−0.228	−0.543	−0.483
	(0.505)	(0.465)	(0.553)
factor(earningsquantile)5	−1.470**	−1.313**	−0.838
	(0.713)	(0.616)	(0.624)
paymentL	−0.694**	−0.395	−0.699**
	(0.348)	(0.292)	(0.333)
Constant	−3.729**	−0.171	−1.685
	(1.715)	(1.481)	(1.684)
Akaike Inf. Crit.	1,106.035	1,106.035	1,106.035
Note:			*p<0.1; **p<0.05; ***p<0.01

Conclusion

- We ask around 1,100 people in Luxembourg about the connection between monetary policy and housing prices
- Conventional monetary policy is understood by a vast majority, unconventional monetary policy not so much
- Two thirds of respondents think there is a connection between interest rates and house prices
- Survey participants overwhelmingly link interest rate decreases to increasing house prices, in line with economic theory
- Some asymmetry
- Some participants correct an initially wrong assessment when presented with information by academic economists or central bankers
- Participants are more reactive to information provided by academic economists

Discussion and policy recommendations

- Knowledge about monetary policy is limited, especially about unconventional monetary policy
- Better education about monetary policy warranted
- Central bankers communication limited as compared to academic/researcher communication

Thank you!

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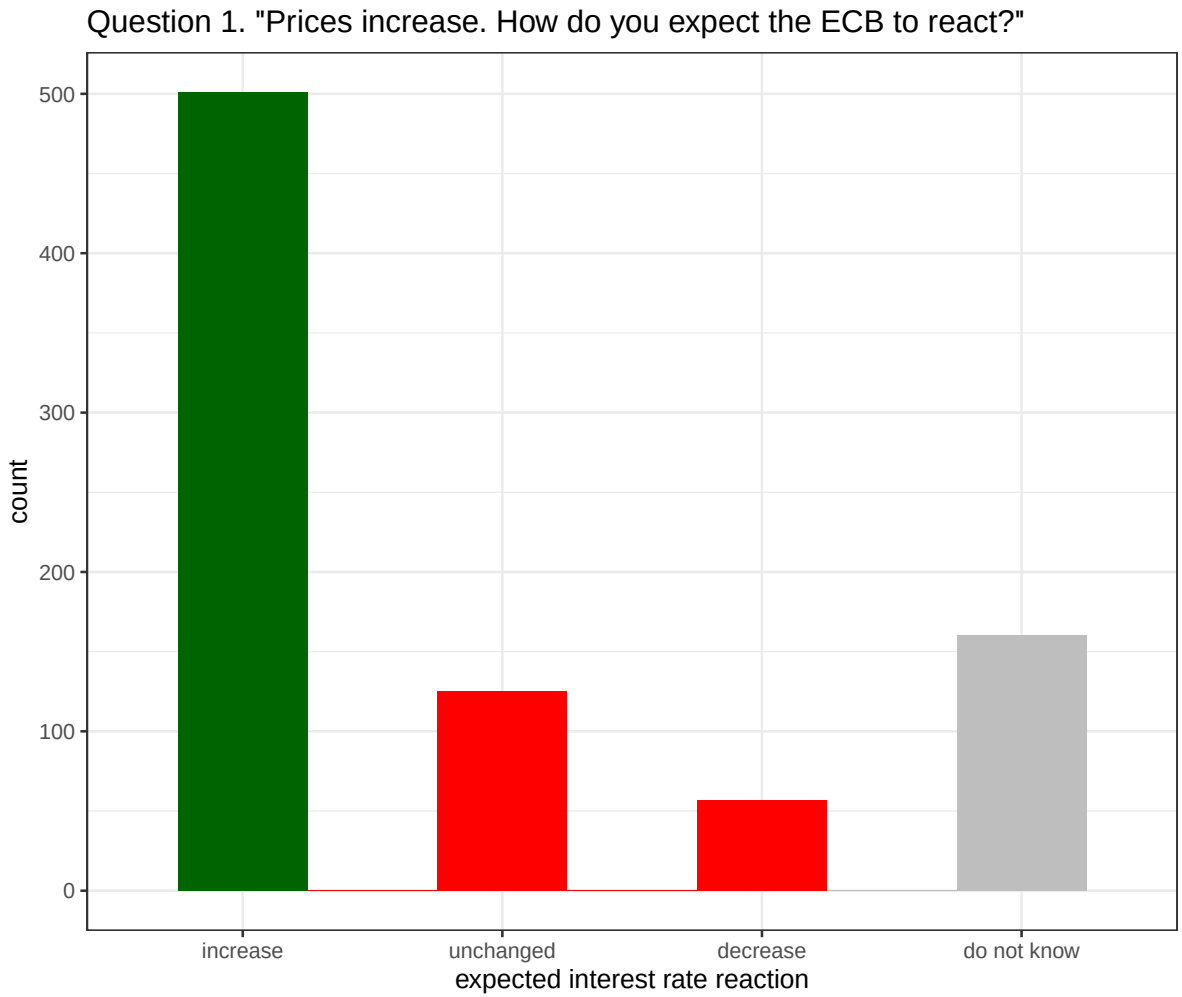
Do people understand monetary policy?

Question 1: What do people think about conventional monetary policy?



Frequencies

Do people understand monetary policy?

	Dependent variable:			
	correct conv. MP	correct unconv. MP	correct conv. MP	correct unconv. MP
	(1)	(2)	(3)	(4)
correct unconv. MP	0.792***		0.659***	
	(0.103)		(0.111)	
correct conv. MP		0.771***		0.629***
		(0.100)		(0.109)
sex			0.290***	0.177*
			(0.094)	(0.100)
age			−0.002	−0.001
			(0.005)	(0.005)
In a partnership			0.236	−0.346**
			(0.163)	(0.174)
Married or PACS			0.063	−0.042
			(0.136)	(0.143)
Widowed			−0.893	−4.261
			(0.586)	(118.323)
Divorced			−0.001	−0.534**
			(0.229)	(0.268)
children			−0.132	0.133
			(0.121)	(0.124)
job_loss			−0.003	0.007
			(0.023)	(0.025)
life_satisfaction			−0.005	0.027
			(0.025)	(0.027)
LUX born			−0.374***	−0.088
			(0.109)	(0.116)
high education			0.165	0.381***
			(0.116)	(0.132)
vote			−0.123	0.079
			(0.136)	(0.139)
income quantile 2			−0.014	−0.052
			(0.146)	(0.167)
income quantile 3			0.110	0.137
			(0.151)	(0.166)
income quantile 4			0.189	0.229
			(0.157)	(0.169)
income quantile 5			0.377**	0.523***
			(0.170)	(0.174)
risk measure			−0.174*	0.192*
			(0.096)	(0.101)
Constant	0.021	−1.012***	0.007	−2.048***
	(0.052)	(0.082)	(0.460)	(0.493)
Observations	839	839	806	806
Log Likelihood	-535.039	-483.927	-486.709	-433.810
McFaddens Pseudo R-Squared	0.055	0.061	0.105	0.124
Note:				*p<0.1; **p<0.05; ***p<0.01

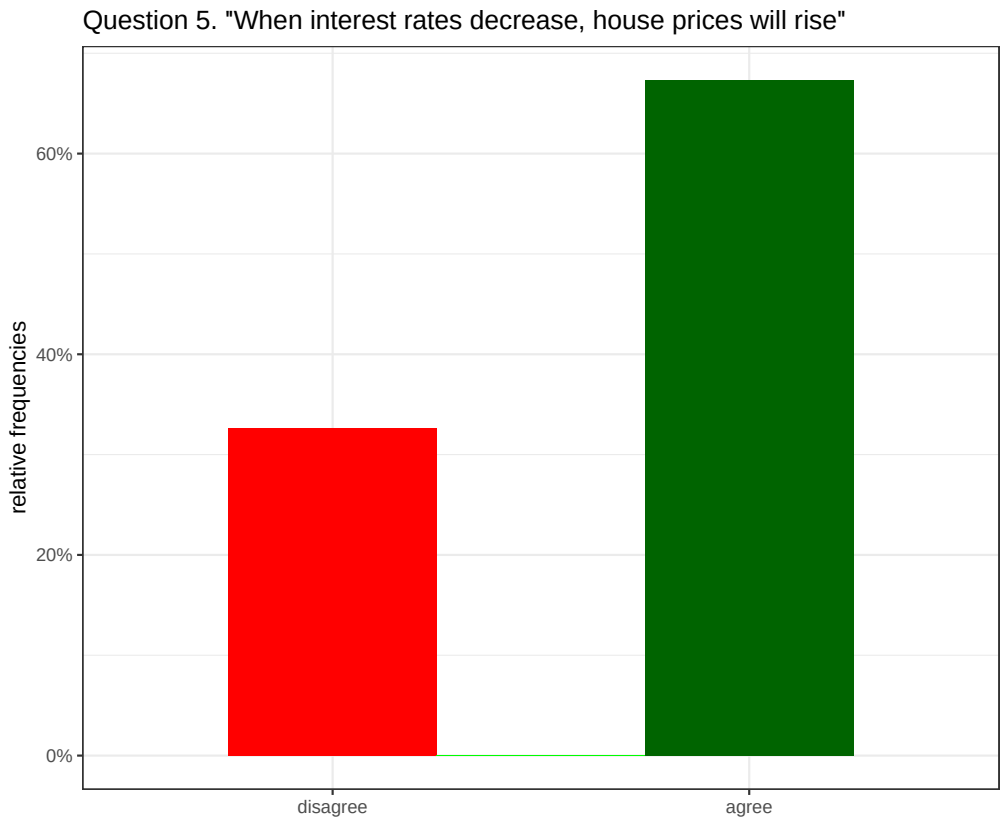
Pearson's product moment correlation coeff. $\rho_{convMP,unconvMP} = 0.266$, 95% KI: (0.202, 0.328)

Back

Interest rates and house prices - direction

Question 4:

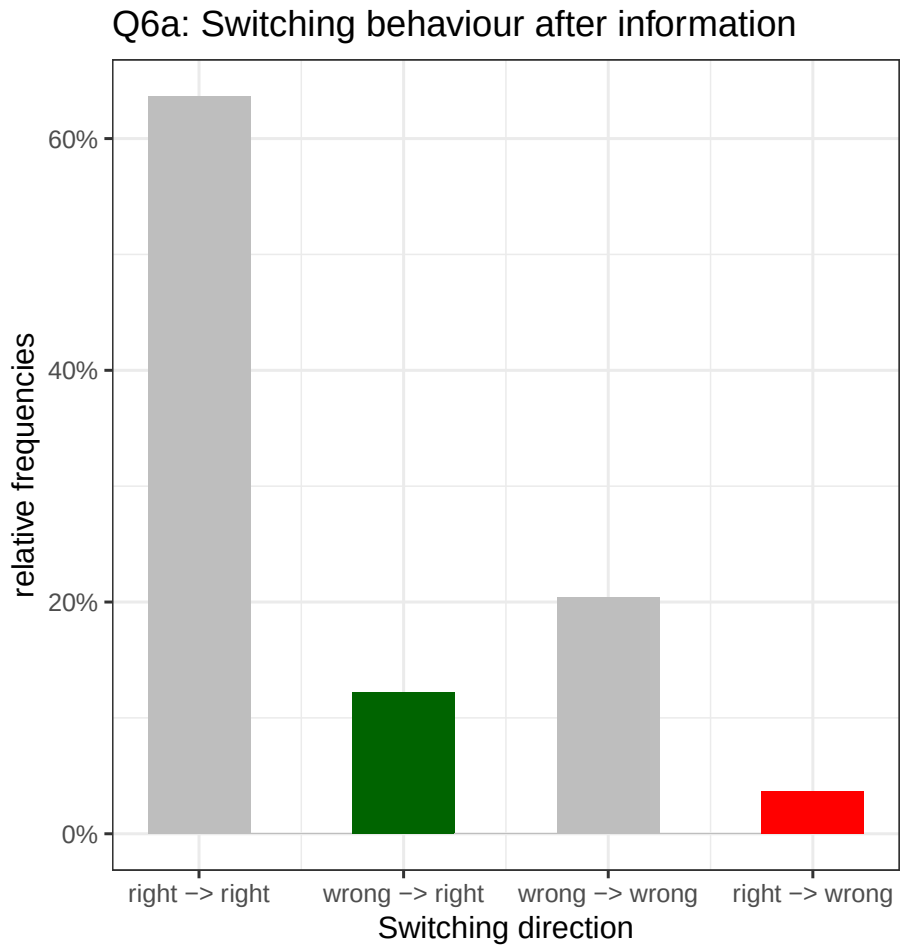
When the interest rate decreases, house prices will rise.



Back

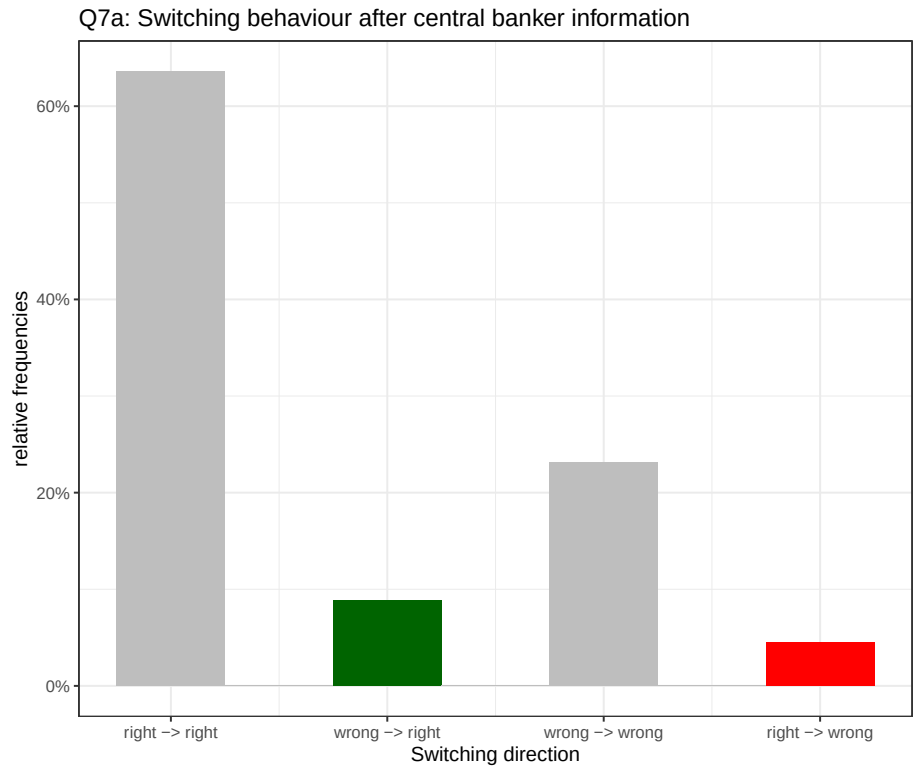
Switching behaviour - aggregate

When the interest rate decreases, house prices will rise.



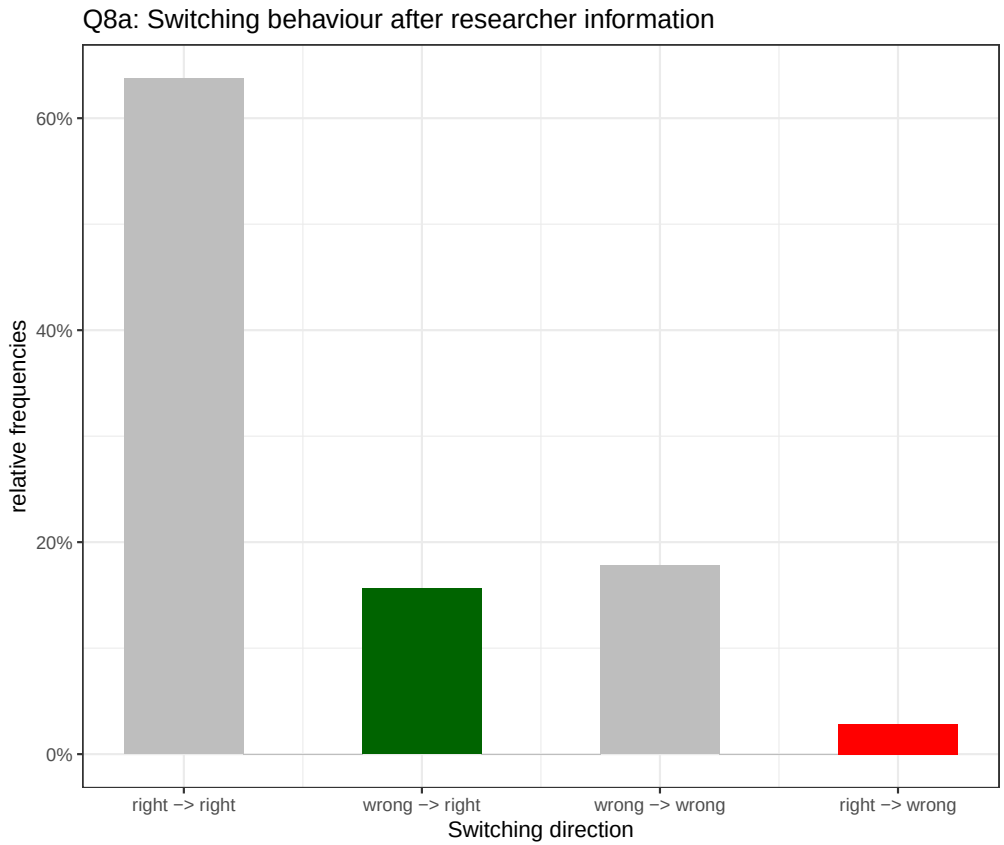
Back

Switching behaviour - central banker information



Back

Switching behaviour - reseacher information



Back

Switching behaviour - mirrored question

	Dependent variable:			
	right → right	wrong → right	wrong → wrong	right → wrong
random_monetary	0.051	0.329***	−0.251**	−0.201
	(0.095)	(0.122)	(0.106)	(0.190)
sex	0.203**	−0.206*	−0.200*	0.272
	(0.094)	(0.121)	(0.106)	(0.183)
age	−0.010**	0.004	0.010*	−0.001
	(0.005)	(0.006)	(0.005)	(0.009)
In a partnership	0.087	0.014	−0.150	0.052
	(0.162)	(0.198)	(0.185)	(0.292)
Married or PACS	0.105	−0.135	−0.034	−0.065
	(0.137)	(0.171)	(0.152)	(0.261)
Widowed	0.450	−0.157	−0.285	−4.034
	(0.468)	(0.607)	(0.485)	(490.519)
Divorced	0.307	0.104	−0.326	−4.283
	(0.238)	(0.281)	(0.274)	(199.069)
children	−0.092	0.107	0.070	−0.116
	(0.121)	(0.155)	(0.136)	(0.236)
job_loss	−0.070***	0.062**	0.045*	−0.005
	(0.023)	(0.027)	(0.024)	(0.045)
life_satisfaction	−0.031	0.007	0.037	0.005
	(0.025)	(0.032)	(0.028)	(0.051)
LUX born	−0.292***	−0.226	0.369***	0.631***
	(0.108)	(0.142)	(0.119)	(0.219)
high education	0.316***	−0.154	−0.331***	0.184
	(0.115)	(0.146)	(0.125)	(0.225)
vote	0.112	0.010	−0.278	0.424
	(0.140)	(0.168)	(0.170)	(0.274)
income quantile 2	0.157	−0.119	−0.087	−0.100
	(0.146)	(0.176)	(0.160)	(0.286)
income quantile 3	0.225	−0.177	−0.241	0.196
	(0.150)	(0.188)	(0.168)	(0.264)
income quantile 4	0.119	−0.024	0.004	−0.902**
	(0.154)	(0.189)	(0.167)	(0.450)
income quantile 5	0.705***	−0.599**	−0.520***	−0.164
	(0.172)	(0.233)	(0.195)	(0.323)
risk measure	0.255***	−0.031	−0.197*	−0.461**
	(0.095)	(0.121)	(0.106)	(0.198)
Constant	0.240	−1.495**	−0.355	−2.364**
	(0.487)	(0.620)	(0.544)	(0.955)
Observations	812	812	812	812
McFaddens Pseudo R^2	0.088	0.062	0.093	0.134
Note:				*p<0.1; **p<0.05; ***p<0.01

Back

- Information by researchers increases the probability to switch in the right direction!
- Those expecting job loss more likely to be good switchers
- Respondents with lower education, keep wrong answer
- Luxembourg born bad switchers