

Crying Wolf in the Lab

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January 25, 2022

Abstract

Keywords:

1 Introduction

A Tables

Table 1: WTP for Information (Discrepancy)

	(1)	(2)	(3)	(4)	(5)	(6)
FP costs	.251*	.305**	.0991	.136	.404**	.439**
	(0.1)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)
FN costs	.356***	.292***	.397***	.348***	.425***	.375***
	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Risk-averse			.0046	-.154		
			(0.3)	(0.4)		
Risk-averse \times FP costs			.187	.227		
			(0.2)	(0.3)		
Risk-averse \times FN costs			-.066	-.118		
			(0.2)	(0.1)		
Accur. beliefs					.212	.335
					(0.3)	(0.4)
Accur. beliefs \times FP costs					-.361	-.339
					(0.2)	(0.2)
Accur. beliefs \times FN costs					-.143	-.166
					(0.1)	(0.1)
Constant	-.233	.288	-.237	.336	-.331	.145
	(0.2)	(0.2)	(0.3)	(0.3)	(0.2)	(0.3)
Prior dummies	No	Yes	No	Yes	No	Yes
Observations	630	630	588	588	630	630
Adjusted R^2	0.05	0.21	0.04	0.22	0.05	0.22

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 2: WTP for Information (Discrepancy, demographic variables)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
								est8	est9
FP costs	.251*	.283	.352*	.117	.215	.263*	.307**	.479**	.515*
	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	(0.1)	(0.1)	(0.2)	(0.2)
FN costs	.356***	.322***	.247***	.395***	.303***	.307***	.251***	.493***	.453*
	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Male		-.251	-.238						
		(0.3)	(0.4)						
Male \times FP costs		-.122	-.159						
		(0.2)	(0.2)						
Male \times FN costs		.0857	.117						
		(0.1)	(0.1)						
Stat. class				-.28	-.194				
				(0.3)	(0.4)				
Stat. class \times FP costs				.218	.145				
				(0.3)	(0.3)				
Stat. class \times FN costs				-.0785	-.0188				
				(0.1)	(0.1)				
>23 yrs						-.335	-.606		
						(0.4)	(0.4)		
>23 yrs \times FP costs						-.0837	.00811		
						(0.3)	(0.3)		
>23 yrs \times FN costs						.346	.275		
						(0.2)	(0.2)		
Good quiz								.493	.453
								(0.3)	(0.4)
Good quiz \times FP costs								-.441*	-.41
								(0.3)	(0.3)
Good quiz \times FN costs								-.253*	-.295
								(0.1)	(0.1)
Constant	-.233	-.126	.391	-.0579	.419	-.188	.356	-.5**	.045
	(0.2)	(0.2)	(0.3)	(0.3)	(0.4)	(0.2)	(0.2)	(0.3)	(0.3)
Prior dummies	No	No	Yes	No	Yes	No	Yes	No	Yes
Observations	630	630	630	630	630	630	630	630	630
Adjusted R^2	0.05	0.05	0.21	0.05	0.21	0.05	0.21	0.05	0.22

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: WTP for Information (Discrepancy, by prior)

	(1)	(2)	(3)	(4)
	0.1	0.2	0.3	0.5
FP costs	.472*** (0.2)	.585*** (0.2)	.0821 (0.2)	-.326 (0.3)
FN costs	-.609** (0.2)	.192 (0.1)	.26** (0.1)	.379*** (0.1)
Constant	.412* (0.2)	-.715*** (0.2)	-.968*** (0.2)	.671** (0.3)
Observations	162	153	162	153
Adjusted R^2	0.04	0.05	0.01	0.09

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: WTP for Information (Tobit, by prior)

	(1)	(2)	(3)	(4)
	0.1	0.2	0.3	0.5
model				
FP costs	-.624** (0.2)	-.519** (0.3)	-1.24*** (0.3)	-1.3** (0.5)
FN costs	-1.22** (0.6)	-.682*** (0.3)	-.612*** (0.2)	-.365*** (0.1)
Constant	1.72*** (0.2)	2.33*** (0.2)	2.63*** (0.2)	3.32*** (0.3)
sigma				
Constant	1.86*** (0.1)	1.7*** (0.1)	1.77*** (0.1)	2.16*** (0.2)
Observations	162	153	162	153
Adjusted R^2				

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: WTP for Information (Tobit, by prior)

	(1)	(2)	(3)	(4)
	0.1	0.2	0.3	0.5
model				
FP rate	-2.81** (1.1)	-2.08** (1.0)	-4.35*** (1.0)	-3.25** (1.3)
FN rate	-2.45** (1.1)	-2.73*** (1.0)	-3.67*** (1.0)	-3.65*** (1.3)
Constant	1.72*** (0.2)	2.33*** (0.2)	2.63*** (0.2)	3.32*** (0.3)
sigma				
Constant	1.86*** (0.1)	1.7*** (0.1)	1.77*** (0.1)	2.16*** (0.2)
Observations	162	153	162	153
Adjusted R^2				

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: WTP for Information (different risk aversion)

	(1)	(2)	(3)	(4)	(5)	(6)
	$\theta = 0$	$\theta = 0.5$	$\theta = 1.0$	$\theta = 1.5$	$\theta = 2.5$	Heterogeneous θ
FP costs	.295** (0.1)	.322** (0.1)	.316** (0.1)	.271* (0.1)	.151 (0.1)	.29** (0.1)
FN costs	.243*** (0.1)	.346*** (0.1)	.46*** (0.1)	.559*** (0.1)	.69*** (0.1)	.343*** (0.1)
Constant	.254 (0.2)	-.146 (0.2)	-.664*** (0.2)	-1.32*** (0.2)	-1.81*** (0.2)	-.411 (0.3)
Prior dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	504	504	504	504	504	504
Adjusted R^2	0.21	0.27	0.28	0.32	0.37	0.19

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: WTP for Information (different risk aversion)

	(1)	(2)	(3)	(4)	(5)
	$\theta = 0$	$\theta = 0.5$	$\theta = 1.0$	$\theta = 1.5$	$\theta = 2.5$
FP costs	.305** (0.1)	.337*** (0.1)	.336*** (0.1)	.292** (0.1)	.176 (0.1)
FN costs	.292*** (0.1)	.393*** (0.1)	.502*** (0.1)	.596*** (0.1)	.724*** (0.1)
Constant	.288 (0.2)	-.111 (0.2)	-.629*** (0.2)	-1.29*** (0.2)	-1.78*** (0.2)
Prior dummies	Yes	Yes	Yes	Yes	Yes
Observations	630	630	630	630	630
Adjusted R^2	0.21	0.28	0.29	0.32	0.37

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Belief Elicitation: Discrepancy

	(1)	(2)	(3)	(4)	(5)	(6)
False neg. rate	-.0101 (0.0)	-.0101 (0.0)	.05 (0.1)	.05 (0.1)	.0886 (0.1)	.0876 (0.1)
False pos. rate	-.606*** (0.1)	-.606*** (0.1)	-.75*** (0.1)	-.749*** (0.1)	-.664*** (0.1)	-.66*** (0.1)
Good quiz			-.0299 (0.0)	-.0538 (0.0)		
Good quiz \times False neg. rate			-.102 (0.1)	-.102 (0.1)		
Good quiz \times False pos. rate			.269** (0.1)	.266** (0.1)		
Stat. class					.0203 (0.0)	.0391 (0.0)
Stat. class \times False neg. rate					-.172* (0.1)	-.171* (0.1)
Stat. class \times False pos. rate					.104 (0.1)	.0999 (0.1)
Constant	.0616*** (0.0)	.0279 (0.0)	.0779*** (0.0)	.0566 (0.0)	.0499** (0.0)	.00222 (0.0)
Prior prob dummies	No	Yes	No	Yes	No	Yes
Observations	1260	1260	1260	1260	1260	1260
Adjusted R^2	0.09	0.09	0.09	0.10	0.09	0.09

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Informed Protection: Response to Reported Beliefs

	(1)	(2)	(3)	(4)
Informed protection				
Belief	2.36*** (0.2)	2.67*** (0.2)	2.63*** (0.4)	2.85*** (0.4)
Belief error		1.3*** (0.2)	1.17*** (0.2)	1.44*** (0.3)
Good quiz			.184 (0.2)	
Good quiz \times Belief			.105 (0.5)	
Good quiz \times Belief error			.34 (0.4)	
Stat. class				.0954 (0.2)
Stat. class \times Belief				-.287 (0.5)
Stat. class \times Belief error				-.212 (0.4)
Constant	-.813*** (0.1)	-.914*** (0.1)	-1.01*** (0.2)	-.973*** (0.1)
Observations	1259	1259	1259	1259
<i>AIC</i>	1287.47	1196.40	1194.29	1201.09

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Expected costs discrepancy

	(1)	(2)	(3)	(4)	(5)	(6)
FP costs	.0627 (0.1)	.0297 (0.1)	.153 (0.2)	.135 (0.2)	-.00302 (0.2)	-.0796 (0.2)
FN costs	-.0285 (0.1)	.011 (0.1)	-.103 (0.1)	-.081 (0.2)	.134 (0.1)	.243* (0.1)
Risk-averse			-.167 (0.3)	.121 (0.3)		
Risk-averse \times FP costs			-.143 (0.3)	-.161 (0.3)		
Risk-averse \times FN costs			.169 (0.1)	.198 (0.2)		
Accur. beliefs					.557* (0.3)	.231 (0.3)
Accur. beliefs \times FP costs					.18 (0.3)	.279 (0.3)
Accur. beliefs \times FN costs					-.329** (0.1)	-.46*** (0.2)
Constant	-.872*** (0.1)	-.708*** (0.2)	-.781*** (0.2)	-.797*** (0.2)	-1.15*** (0.2)	-.82*** (0.2)
Prior prob dummies	No	Yes	No	Yes	No	Yes
Observations	629	629	587	587	629	629
Adjusted R^2	-0.00	-0.00	-0.00	-0.01	0.02	0.03

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 11: Expected costs discrepancy (without 10% outliers)

	(1)	(2)	(3)	(4)	(5)	(6)
FP costs	-.241*** (0.1)	-.217*** (0.1)	-.165* (0.1)	-.137* (0.1)	-.274*** (0.1)	-.121 (0.1)
FN costs	-.112*** (0.0)	-.127*** (0.0)	-.0913** (0.0)	-.116*** (0.0)	-.0678 (0.0)	-.103** (0.0)
Risk-averse			-.128 (0.1)	.0384 (0.1)		-.119 (0.1)
Risk-averse \times FP costs			-.073 (0.1)	-.0708 (0.1)		-.0814 (0.1)
Risk-averse \times FN costs			-.0302 (0.1)	-.0167 (0.1)		-.0358 (0.1)
Accur. beliefs					.219*** (0.1)	.259*** (0.1)
Accur. beliefs \times FP costs					.0905 (0.1)	
Accur. beliefs \times FN costs					-.0851 (0.1)	
Constant	-.2*** (0.0)	-.101 (0.1)	-.152*** (0.1)	-.137 (0.1)	-.315*** (0.1)	-.174* (0.1)
Prior prob dummies	No	Yes	No	Yes	No	Yes
Observations	557	557	522	522	557	522
Adjusted R^2	0.05	0.07	0.05	0.08	0.06	0.09

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 12: Expected costs discrepancy by prior

	(1)	(2)	(3)	(4)
	0.1	0.2	0.3	0.5
FP costs	.00323 (0.2)	-.331* (0.2)	.33 (0.3)	.831* (0.5)
FN costs	-1.37*** (0.4)	-.13 (0.2)	-.297*** (0.1)	.18 (0.1)
Constant	-.366*** (0.1)	-.671*** (0.2)	-.821*** (0.2)	-1.44*** (0.4)
Observations	161	153	162	153
Adjusted R^2	0.08	0.01	0.02	0.02

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

B Figures

Figure 1: Belief Updating

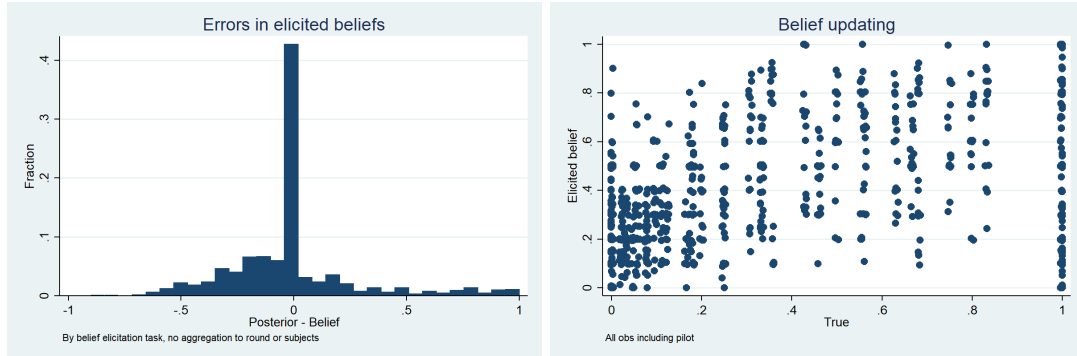


Figure 2: Following beliefs vs following posterior probabilities in IP

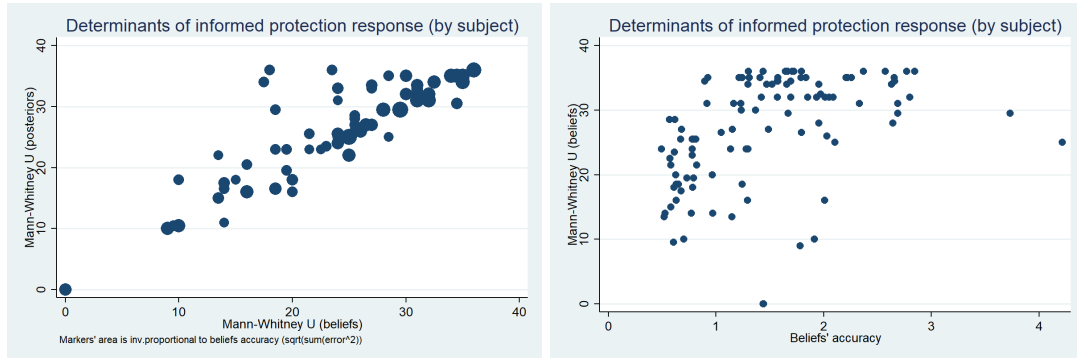


Figure 3: x

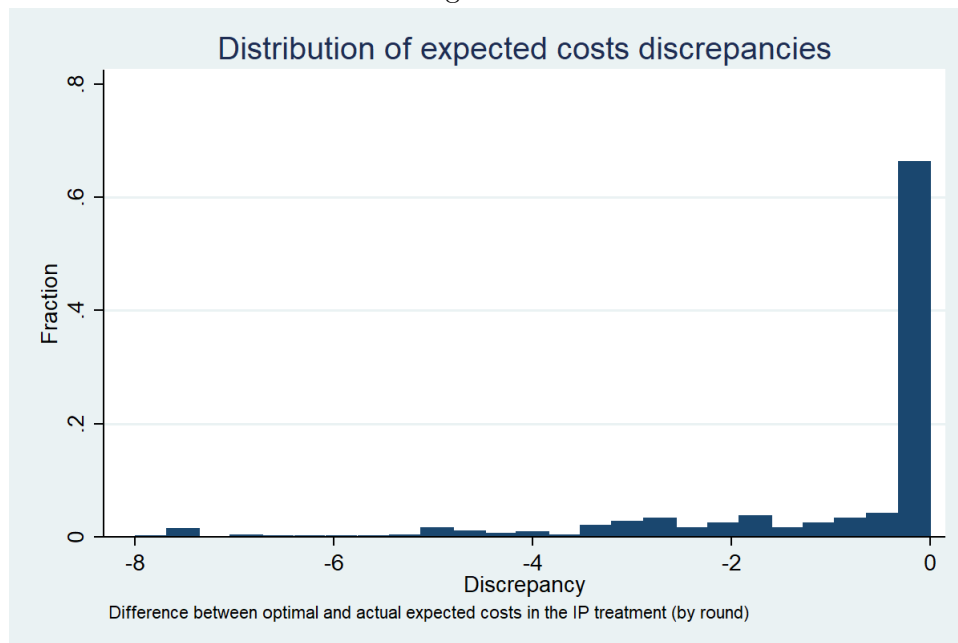


Figure 4: WTP discrepancy

