Paying Agents to Promote Consumer Welfare from Catastrophic Drought Insurance

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Improving financial decision-making

- Suboptimal financial decisions commonplace, both over- & under-purchase.
- Most research targets **consumers** to improve their financial decisions via choice architecture, disclosure, education, etc. – with only modest effects.
- But consumers rarely choose alone. Targeting **commissioned agents'** incentives can move consumer choices a lot.
  - +10% commission ⇒ clients invest **4.6%** more (Battiston et al., 2026)
- How to motivate agents **and boost consumer welfare**?
  - Sales volume-based compensation risks **overselling**.
  - Regulation can change commissions' **level and form**. Increased fiduciary duty: +25pp client returns, −**16%** firm entry (Bhattacharya et al., 2025)
- But to date no studies change agents' **compensation function**.

Can we align agents' commissions with consumer welfare?
What does this imply for agent behavior, consumer response, and welfare?

What we do in this paper

- **We make consumer welfare computable – and communicable.**
  - Estimate expected consumer surplus (ECS) from commercial **catastrophic drought insurance** coverage, in **real time at the point of sale**.
  - Communicated to the potential consumer as **individually tailored advice**: insure X cattle or Y goats, or do not buy.
- **Randomize agents' commission function across sites (within agent).**
  - Pay f(sales) or g(ECS).
  - Advice and E[pay|village] fixed across treatment arms. Only agent compensation incentives differ.
  - Fielded in a real commercial market: 80 agents, 240 villages, 2,416 hhs.
- **Key questions:**
  - Do consumer-welfare-based commissions change agent/consumer behavior?
  - Does this boost consumer welfare (or at least do no harm)?
  - What mechanism(s) at play?

What we find 1

(i) Changing agent incentives changes consumer behavior and welfare

- **Tailored advice alone** (agents still paid on sales): **No change**.
- **Advice + ECS-based comp.**: uptake $\downarrow$ 1.0-2.1 pp (-12 to -25%).
- Among consumers advised **not** to buy: Greater compliance with advice (68 % of control noncompliers now comply). Welfare-reducing purchases $\downarrow$ 25% and ECS $\uparrow$ 45%.
- **One-sided effect**: No signif. effect on the 75% who should buy but don't. But reduces over-purchase due to misaligned agent incentives.

What we find 2

(ii) Welfare-aligned incentives appear commercially feasible

- Agent effort and earnings are **unchanged**.
- **Revenue-neutral for insurer**: it changes who purchases and how much, not the cost of agents selling nor insurer's premium revenue.

(iii) Mechanisms

- Lab-in-the-field experiment shows that agents respond to consumer preferences and advice. But their incentives dominate those influences.
- Welfare incentives reduce agents' overestimation of consumer knowledge. The least-informed consumers don't improve knowledge yet enjoy largest welfare gains. Agents seem the mechanism.

Contributions

1. **How agents are paid** *(we randomize the commission schedule itself)*

   Commission schedules in live financial markets studied observationally or quasi-experimentally (Anagol, Cole and Sarkar, 2017; Hoechle et al., 2018; Egan, 2019; Bhattacharya, Illanes and Padi, 2025; Battiston et al., 2026); or randomized pay *outside* live transactions (Cole, Kanz and Klapper, 2015) or outside finance (Ashraf, Bandiera and Jack, 2014).

   We randomize the commission function — a synthetic fiduciary standard delivered through pay, not statute — in a live market: 80 agents, three seasons, each serving all arms, at no extra cost.

2. **Personalizing consumer financial advice** *(deliverable to illiterate, remote groups)*

   Generic financial education struggles with heterogeneous beliefs and preferences Handel et al., 2015; Ambuehl et al., 2022); personalized benchmarks can work (Kling et al., 2012).

   We deliver real-time, individually-computed, welfare-based advise at the point of sale to low-literacy consumers.

3. **Algorithmic advice adoption** *(human agents help protect buyers from themselves)*

   Algorithms can identify welfare-maximizing choices, but people generally ignore advice (Stevenson and Doleac, 2022; Angelova, Dobbie and Yang, 2023; Agarwal et al., 2023).

   We align the *intermediary's* pay, incentivizing agents to reinforce advice. Works in one direction; reduces over-selling.

Research design

Setting: Commercial satellite-based drought insurance

- The drylands of Africa are home to 250-300 mn pastoralists.
  - In 2023, 77% of livestock losses were due to drought-related causes.
- Index insurance (IBLI) insures livestock loss against a NDVI-based index.
  - Payments trigger when the index falls below a threshold, not when losses are verified $\Rightarrow$ **two-sided basis risk**
  - Consumer value therefore depends on 1) how often the **index** triggers; 2) how much of **their own herd** is at risk; 3) and how much they dislike **risk**.
  - IBLI's positive average welfare impacts already demonstrated (Jensen et al., 2017; Jansen & Carter, 2019; Tafere et al., 2019; Jensen et al., 2024; Barrett et al., 2026)
  - Cumulative adoption is 45%; cumulative *dis*adoption is 30%.
  - **Consumer understanding very limited:** 1.9/10 at baseline.
- Agents are paid revenue-based sales commissions (8%).
  - Almost all herd livestock themselves, and live in the kebele they serve.
  - **Agents are far better informed than their clients**: 92% literate vs 21% of herders; IBLI agents' knowledge is 8.2/10
  - 46% had bought IBLI themselves by midline 1, 81% by endline.

Intervention 1: Tailored Advice to buy or not buy insurance

- Recommend share of assets to insure that maximizes Expected Consumer Surplus (ECS), estimated structurally for each survey participant.
- ECS from **three elicited inputs**, measured each round **before** treatment:
  - **Index belief** q: subjective prob. the index triggers in the upcoming season, 10-bin scale.
  - **Loss belief**: of 10 animals held now, how many survive the season — asked per species.
  - **Risk preference**: CRRA parameter elicited in a baseline lottery.
  - Plus the **herd roster** and contract terms (premium, strike, exit, insured values).
  - $ECS = CE_{\text{buy}} - CE_{\text{no buy}}$ for each feasible share ▸ Details
- **Advice delivered**: the optimal purchase volume if $CE_{\text{buy}} > CE_{\text{no buy}}$, not to purchase if $CE_{\text{buy}} < CE_{\text{no buy}}$, inconclusive if the two are close.

▸ Example advice

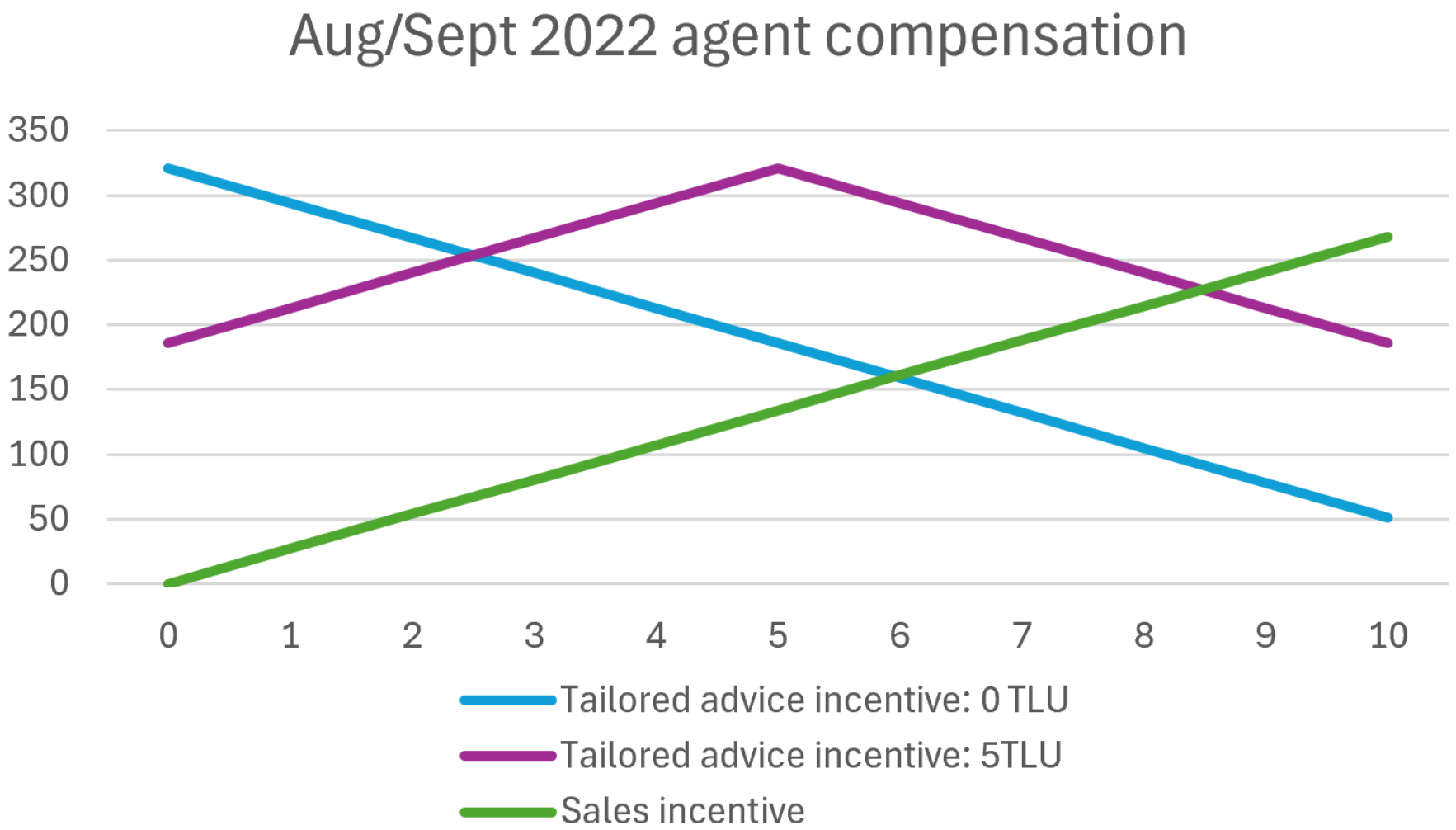
Intervention 1: Pictorial advice video w/basic explanation

- 15-minute video to explain the generation of tailored advice
- Content:
  - Three fictional consumers receive different types of advice: buy, not buy, inconclusive ▸ Video example
  - Explain key inputs to tailored advice (risk aversion, subjective expectation of losses and index trigger, historical average indemnity payment probability). Emphasize not to follow advice based on wrong inputs or if they disagree with our model of welfare.
- Delivered in local language, using local imagery and familiar examples.

Intervention 2: "Welfare-aligned" agent incentives

- Status Quo:
  - Agents earn 8% sales commission, capped at $33/season
- Welfare-aligned agent incentive:
  - Payment based on match between consumer choice and their tailored advice
  - Payment maximized when the consumer's choice matches the advice.
  - Declines linearly with deviation, so under-purchase and over-purchase penalized symmetrically.
  - Expected incentives per village **equalized across schemes by design**.
- Implementation:
  - Agents paid by insurer based on advice records and actual sales

Agent compensation functions



Research design

- 2,416 pastoralist households, 240 villages, 80 kebeles in Borana Zone
  - Three sales seasons and four survey rounds, 2021–2023.

Treatment arm	Pastoralist intervention	Insurance agent incentive
Control	None	Sales incentive
Advice+Sales (T1)	Tailored advice + Video	Sales incentive
Advice+Welfare (T2)	Tailored advice + Video	Welfare-aligned incentive

- Village-level randomization within kebele (80 agents, 1/kebele $\times$ 3 villages).
  - Each agent serves one village per arm: **within agent** comparisons.
- All arms receive the same standardized insurance information at baseline.
- Herd size and beliefs are elicited **before** any treatment content each round.

▸ Balance: herders ▸ Balance: agents ▸ Attrition ▸ Balance: advice

Estimating equation

We estimate the following OLS equation:

$$y_{(a)izkt} = \beta_0 + \beta_1 T1_{zk} + \beta_2 T2_{zk} + \delta_{kt} + \epsilon_{(a)izkt} \quad (1)$$

where

- $y_{(a)izkt}$: the outcome of interest for respondent (or agent) i in village z of kebele k in survey round t (a denotes animal species).
- $T1_{zk}$=1 if village z in kebele k is assigned to the Advice + Sales incentive group; $T2_{zk}$=1 for Advice + Welfare incentive group.
- δ_{kt} represents kebele $\times$ survey round-fixed effects.
- $\epsilon_{(a)ikzt}$ represents the error term clustered at the village level, the unit of randomization.
- We also test $\beta_1 = \beta_2$ and report coefficients and p-values.

Results

Which input actually drives the advice?

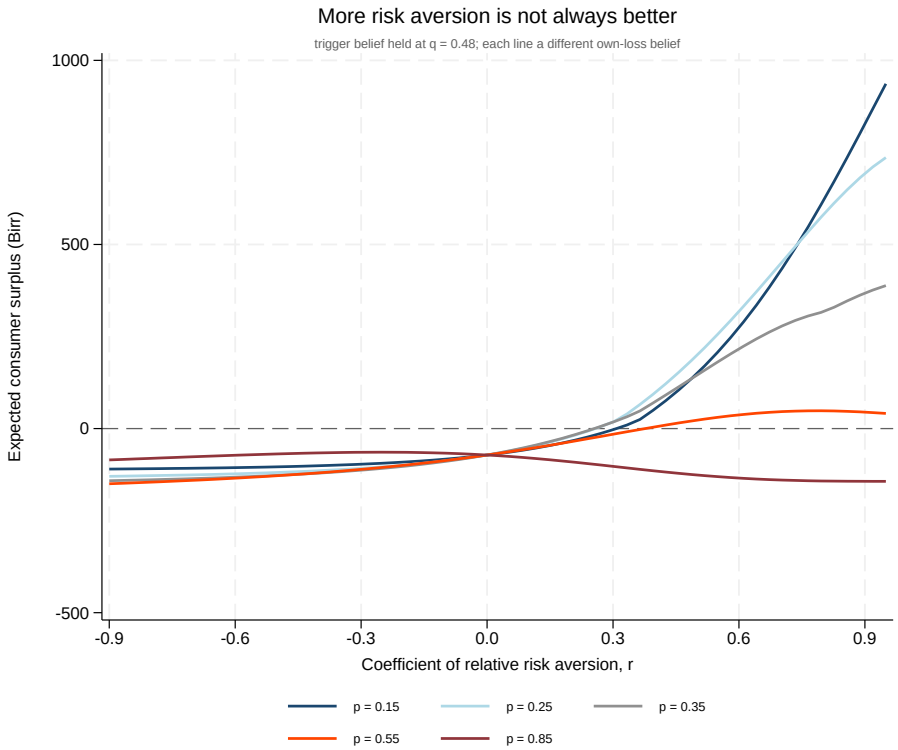
Shapley decomposition: share of explained variation attributable to each ECS input

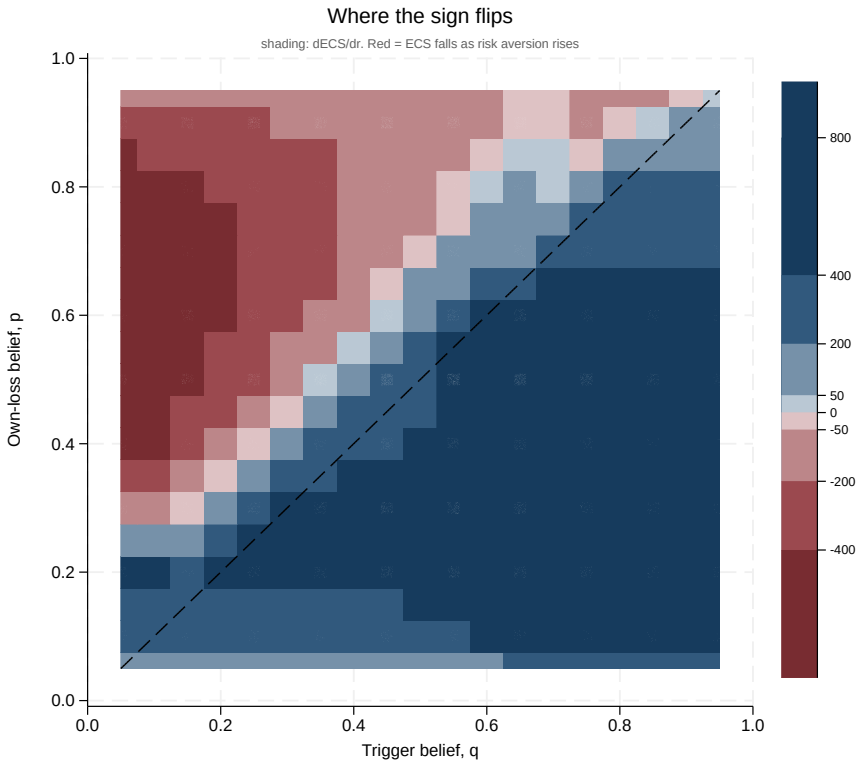
	Pre-computed ECS	Advice to purchase	Advised number of animals	Expected consumer surplus
	(1)	(2)	(3)	(4)
Risk aversion	0.166	0.0220	0.000804	0.143
Herd size	0.246	0.00473	**0.985**	0.266
Index trigger belief	**0.574**	**0.947**	0.0126	**0.576**
Herd loss belief – first season	0.00313	0.0197	0.000774	0.00322
Herd loss belief – second season	0.0102	0.00695	0.000825	0.0117

- The two margins are driven by **different** inputs:
  - **Whether** to buy: the index trigger belief, **94.7%**.
  - **How much** to buy: herd size, **98.5%**.
- Risk aversion matters for the *magnitude* of ECS (14–17%) but barely for the recommendation; loss beliefs contribute almost nothing.

Why risk aversion barely moves the advice

Expectations are over the **joint** distribution of the index triggering and the herd surviving. ECS is **not** monotone in risk aversion.





If own-loss probability $>$ trigger probability, the dominant insured state is "lose the herd *and* receive nothing", so more risk aversion makes the contract **worse** (**26%** of household-rounds).

How good (or bad) are baseline consumer decisions?

- In 85.2% of consumer decisions, the advice was to **purchase**.
  - **Of those, 12.2% actually bought insurance.**
  - **Of those advised *not* to purchase, 90.6% did not buy.**

	Advice received		Total
	Purchase (85.2%)	Do not purchase (14.8%)	
	(1)	(2)	
Actual: Purchased (11.8%)	0.122	0.094	1.000
Actual: Did not purchase (88.2%)	0.878	0.906	1.000
Total	1.000	1.000	

Only 23.8% of decisions match the advice.
Two distinct failures: under-purchase by 74.8%, over-purchase by 1.4%.

Do welfare-aligned agent incentives change purchases?

	IBLI purchase = 1	N of animals insured	N of animals insured (|Purchase= 1)
	(1)	(2)	(3)
Advice+Sales vs. Control	−0.007	−0.012	0.002
	(0.466)	(0.640)	(0.992)
	[0.549]	[0.696]	[0.993]
Advice+Welfare vs. Control	−0.021**	−0.022	0.354
	(0.0199)	(0.409)	(0.156)
	[0.0700]	[0.548]	[0.316]
Welfare vs. Sales ($\beta_2 - \beta_1$)	−0.015*	−0.009	0.352
	(0.0559)	(0.649)	(0.140)
	[0.0550]	[0.593]	[0.173]
N	26744	26744	1909
Control Mean	0.0818	0.312	3.812

- Welfare-aligned agent incentives cut consumer uptake by **2.1pp,** ≈ 25**%**.
  - (Weakly) increase coverage conditional on purchase, by 0.354 TLU (≈9%).
  - Welfare-aligned agents sell to **fewer** consumers, but **more** to each buyer.

▸ HH level ▸ Kebele-Round FE ▸ By round ▸ By species

Whose decisions change?

	Followed the advice = 1		
	Any advice	Advised to purchase insurance	Advised NOT to purchase insurance
	(1)	(2)	(3)
Advice+Sales vs. Control	−0.007	−0.016	0.017
	(0.434)	(0.277)	(0.405)
	[0.550]	[0.370]	[0.493]
Advice+Welfare vs. Control	0.001	−0.022	0.058**
	(0.896)	(0.119)	(0.0137)
	[0.903]	[0.229]	[0.0610]
Welfare vs. Sales ($\beta_2 - \beta_1$)	0.008	−0.007	0.041*
	(0.303)	(0.579)	(0.0653)
	[0.451]	[0.525]	[0.0460]
N	17064	14123	2914
Control Mean	0.263	0.125	0.915

- Adherence rises **only** where the advice says do *not* purchase: +0.058 ($p = 0.014$), on a 91.5% control base. **The commission, not the advice, changes outcomes**.
- No effect when the advice is to purchase – from a control mean of **12.5%**.
- The margin with the most room to improve is the one that does not respond. Why? Changed agent incentives don't affect this margin.

▸ N of animals ▸ HH level ▸ Kebele-Round FE ▸ By round ▸ By knowledge

Are consumers better off?

Realized Expected Consumer Surplus (ECS) in Ethiopian Birr (Higher is better)

	Any advice	Advice: purchase insurance	Advice: do not purchase insurance
	(1)	(2)	(3)
Advice+Sales vs. Control	0.082	−1.527	−3.689
	(0.993)	(0.886)	(0.409)
	[0.995]	[0.896]	[0.526]
Advice+Welfare vs. Control	13.511	10.165	8.564**
	(0.143)	(0.347)	(0.0358)
	[0.252]	[0.479]	[0.0810]
Welfare vs. Sales ($\beta_2 - \beta_1$)	13.429	11.692	12.253***
	(0.132)	(0.253)	(0.00668)
	[0.168]	[0.264]	[0.0690]
N	16630	13726	2878
Control Mean	−243.1	−291.5	−21.22

- When advice is 'don't buy', the welfare-aligned commission closes **8.56 of a 21.22 ETB shortfall from optimum, a 45% welfare gain; 56% higher surplus than under Advice+Sales.**.
- Welfare gains from reduced over-purchase, the margin changed by agent incentives.

▸ Distribution ▸ HH level ▸ Kebele-Round FE ▸ By round ▸ Winsorized ▸ What drives the advice

. . . and in observable outcomes?

	Herd size (TLU)	Loss share of init. TLU	Sales (TLU)	Intake (TLU)	Births (TLU)	Feed exp. (ETB)	Vet exp. (ETB)
	Species (decision) level					Household level	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
A+S vs. Control	-0.224	0.020	-0.081	0.003	-0.044*	262.106	168.171
	(0.118)	(0.261)	(0.177)	(0.682)	(0.085)	(0.727)	(0.153)
	[0.215]	[0.367]	[0.281]	[0.764]	[0.117]	[0.751]	[0.241]
A+W vs. Control	0.033	-0.010	0.016	0.009	-0.009	1202.823	117.827
	(0.786)	(0.553)	(0.776)	(0.192)	(0.746)	(0.168)	(0.264)
	[0.796]	[0.565]	[0.791]	[0.241]	[0.812]	[0.241]	[0.344]
A+S vs. A+W	0.258*	-0.030*	0.097*	0.006	0.035	940.717	-50.344
	(0.051)	(0.085)	(0.096)	(0.402)	(0.157)	(0.262)	(0.662)
	[0.123]	[0.203]	[0.182]	[0.444]	[0.236]	[0.355]	[0.720]
95% CI	[-0.002, 0.518]	[-0.063, 0.004]	[-0.017, 0.210]	[-0.008, 0.020]	[-0.014, 0.084]	[-709.876, 2591.310]	[-276.948, 176.260]
90% CI	[0.040, 0.475]	[-0.058, -0.001]	[0.001, 0.192]	[-0.006, 0.018]	[-0.006, 0.077]	[-442.549, 2323.983]	[-240.247, 139.559]
N	1861	1861	1861	1861	1861	815	815
Clusters	212	212	212	212	212	203	203
Control Mean	2.749	0.370	0.848	0.019	0.231	8051.524	1105.933

- Households advised **not** to buy, six months after the advice: herd, losses, sales, intake, births, and herd-management spend.
- No evidence of harm. Under welfare-aligned commissions the point estimates go the right way — larger herds, smaller loss share — but none survives randomization inference.

What does it cost? Agent effort and pay

	Raffle		Incentives	
	Raffle ticket was collected in a village (=1)	Share of herders an agent collected raffle tickets from	Share of herders an agent earned incentive on	Sales agent incentives (ETB)
	(1)	(2)	(3)	(4)
Advice+Sales vs. Control	0.008	-0.071	-1.026	18.420
	(0.547)	(0.948)	(0.566)	(0.291)
	[0.787]	[0.944]	[0.506]	[0.307]
Advice+Welfare vs. Control	-0.008	0.072	3.642*	28.957
	(0.505)	(0.946)	(0.0944)	(0.104)
	[0.728]	[0.948]	[0.122]	[0.127]
Advice+Sales vs. Advice+Welfare	−0.017	0.142	4.668**	10.537
	(0.204)	(0.886)	(0.0260)	(0.549)
	[0.358]	[0.794]	[0.0570]	[0.305]
N	720	720	720	720
Control Mean	0.537	42.47	20.26	117.5

- Effort **unchanged**: tickets collected and herders reached do not move (cols. 1–2).
- Total earnings **unchanged** (col. 4), just paid for different clients' choices (col. 3).

→ Neither agents nor insurer worse off when welfare-aligned incentives used.

▸ Lab-in-the-field

Mechanisms

Lab-in-the-field: What motivates agents?

Avg marginal effect estimate (Probit on agent purchase on herder's behalf.

	(1)	(2)	(3)
Client chose to buy	-0.0079	-0.0079	-0.0081
	(0.252)	(0.252)	(0.237)
Client chose **not** to buy	-0.0744***	-0.0744***	-0.0751***
	(0.000)	(0.000)	(0.000)
Tailored advice to buy	0.0092	0.0092	0.0098
	(0.336)	(0.337)	(0.300)
Tailored advice **not** to buy	-0.0628***	-0.0627***	-0.0625***
	(0.000)	(0.000)	(0.000)
Sales incentive	0.0292***	0.0292***	0.0298***
	(0.001)	(0.001)	(0.001)
Welfare incentive	-0.0592***	-0.0589***	-0.0585***
	(0.000)	(0.000)	(0.000)
Decisions	12,079	12,079	12,079
Omitted category buys	98.0%	98.0%	98.0%
Round controls		✓	✓
Agent characteristics			✓

- Agents respond to **all three**: client says no (-7.4pp), advice says no (-6.3pp), own pay (sales $+2.9$pp, welfare -5.9pp).

$\rightarrow$ Which signal prevails?

▸ Design

Lab-in-the-field: Which signal prevails?

Share of times the agent buys insurance *on the client's behalf*.

	Agent's own incentive			Difference	
	None	Sales	Welfare	Sales − None	Welfare − Sales
Nothing (no "do not buy" signal)	98.5	98.5	—	0.1	—
				(0.797)	
Client says **do not buy**	84.8	93.9	—	9.1***	—
				(0.000)	
Advice says **do not buy**	93.1	94.2	79.5	1.1	−14.6***
				(0.115)	(0.000)
Both say do not buy	—	88.5	82.6	—	−5.9***
					(0.000)
N (decisions)	5,285	4,530	2,265		

- Agents listen: if client does not want IBLI, buying falls 98.5 → 84.8 ($p < 0.001$).
- **Agents' sales incentive influential**: 84.8→ 93.9 ($p < 0.001$).
- Welfare-aligned pay has opposite effect: −14.6pp vs. sales comm. ($p < 0.001$).
- The client's preference is not weak; it is outbid.

▸ Design

Welfare incentives don't change consumer knowledge, but reduce agents' overestimation of it

	Consumers		Agents
	IBLI knowledge score (0-10)	Everyone should buy IBLI if affordable (=1)	Agent's beliefs about herder knowledge (0-10)
	(1)	(2)	(3)
Advice+Sales vs. Control	-0.081	-0.011	0.127
	(0.224)	(0.289)	(0.128)
	[0.291]	[0.360]	[0.118]
Advice+Welfare vs. Control	-0.033	0.001	-0.140
	(0.619)	(0.900)	(0.122)
	[0.666]	[0.928]	[0.155]
Advice+Welfare vs. Advice+Sales	0.048	0.012	−0.267***
	(0.429)	(0.186)	(0.00137)
	[0.542]	[0.299]	[0.00100]
N	6686	6686	720
Control Mean	5.506	0.723	6.789

- Neither arm moves consumer knowledge (cols. 1–2).
- Agents **overestimate** herder knowledge: they put a typical herder at **6.8** of 10, against an actual **5.5**. No incentive to learn client's actual knowledge.
- Welfare-aligned pay incentivizes thinking more about the client. Agents revise beliefs **down** by 0.27, towards the true value.

Welfare incentives help consumers who know the least.

	Buys IBLI (=1)	Adheres to "do not buy" advice (=1)	ECS, advised not to buy
	(1)	(2)	(3)
Low baseline knowledge			
Advice+Sales	−0.011**	0.021*	2.300
	(0.040)	(0.087)	(0.679)
Advice+Welfare	−0.013**	0.026***	10.374***
	(0.012)	(0.008)	(0.008)
Interaction with high baseline knowledge			
Advice+Sales × High	0.025**	-0.050**	-9.766
	(0.017)	(0.046)	(0.432)
Advice+Welfare × High	0.011	-0.019	-5.993
	(0.321)	(0.490)	(0.342)
Implied effect for high-knowledge consumers			
Advice+Sales	0.014	-0.029	-7.47
	[0.11]	[0.14]	[0.39]
Advice+Welfare	-0.0021	0.0069	4.38
	[0.82]	[0.79]	[0.46]
N	26744	2914	2878
Control mean	0.082	0.915	-20.72

- Among **low**-knowledge consumers only, advice leads to a consumer response, but only welfare-aligned generates signif. better outcomes.

▸ Purchase ▸ Adherence ▸ ECS

Conclusion

Conclusion

- **Findings**:
  - Changing agent compensation feasible; affects who purchases and how much.
  - Tailored advice to consumers has no effect on behavior or welfare w/o change in agent compensation.
  - The effect is one-sided: over- and under-purchase are distinct failures. Welfare-aligned agent incentives only affect under-purchase.
- **Mechanisms**:
  - Agents' oversell insurance in response to sales incentives.
  - Welfare-alignment changes agents' incentives ... more sensitive to consumer knowledge and welfare. But doesn't change consumer knowledge.
  - Gains concentrate among consumers with least understanding of product.
- **Implications**:
  - Welfare-aligned agent incentives improve financial decision quality.
  - No change in agent earnings nor effort, nor total insurance sales. Thus is commercially feasible.
  - Reduces harm but doesn't boost uptake among the $\approx 75\%$ who should but don't buy IBLI. Need complementary tool to cover them.

Thank you for your time, interest and comments

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Estimating equation

We estimate the following OLS equation:

$$y_{(a)izkt} = \beta_0 + \beta_1 T1_{zk} + \beta_2 T2_{zk} + \delta_{kt} + \epsilon_{(a)izkt} \quad (2)$$

where

- $y_{(a)izkt}$: the outcome of interest for respondent (or agent) i in village z of area k in survey round t (a denotes animal species in some specifications).
- $T1_{zk}$=1 if village z in area k is assigned to the Advice + Sales incentive group; $T2_{zk}$=1 for Advice + Welfare incentive group.
- δ_{kt} represents area $\times$ survey round-fixed effects.
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- We also test $\beta_1 = \beta_2$ and report coefficients and p-values.

Back

Heterogeneity by knowledge: insurance purchase

	IBLI purchase=1	N of animals insured	N of animals insured (Purchase=1)
	(1)	(2)	(3)
Advice+Sales	-0.011**	-0.032	0.105
	(0.0396)	(0.195)	(0.623)
Advice+Welfare	-0.013**	-0.042	0.272
	(0.0119)	(0.128)	(0.378)
Advice+Sales × High IBLI knowledge	0.025**	0.070	-0.355
	(0.0172)	(0.261)	(0.373)
Advice+Welfare × High IBLI knowledge	0.011	0.075	0.162
	(0.321)	(0.249)	(0.714)
Coefficient: Advice+Sales + Advice+Sales × High knowledge	0.014	0.037	-0.25
p-value: Advice+Sales + Advice+Sales × High knowledge	0.11	0.53	0.50
Coefficient: Advice+Welfare + Advice+Welfare × High knowledge	-0.0021	0.033	0.43
p-value: Advice+Welfare + Advice+Welfare × High knowledge	0.82	0.58	0.23
N	26744	26744	1909
Control Mean	0.0818	0.312	3.812

▸ Average effects ▸ HH level

◂ Back

Heterogeneity by knowledge: adherence to Tailored Advice

	Any advice		Advised to purchase		Advised not to purchase	
	Adhere to advice=1	|Purchase - Advice|	Adhere to advice=1	|Purchase - Advice|	Adhere to advice=1	|Purchase - Advice|
	(1)	(2)	(3)	(4)	(5)	(6)
Advice+Sales	-0.014	-0.239	-0.017**	-0.239	0.021*	-0.039
	(0.125)	(0.340)	(0.0335)	(0.415)	(0.0869)	(0.491)
Advice+Welfare	0.008	-0.101	-0.013*	0.082	0.026***	-0.068
	(0.408)	(0.691)	(0.0870)	(0.786)	(0.00808)	(0.132)
Advice+Sales × High IBLI knowledge	0.028	0.778	0.031*	0.878	-0.050**	0.166
	(0.205)	(0.157)	(0.0740)	(0.173)	(0.0455)	(0.111)
Advice+Welfare × High IBLI knowledge	-0.024	0.219	0.007	-0.109	-0.019	0.062
	(0.263)	(0.621)	(0.672)	(0.829)	(0.490)	(0.594)
Coefficient: Advice+Sales + Advice+Sales × High knowledge	0.013	0.54	0.014	0.64	-0.029	0.13
p-value: Advice+Sales + Advice+Sales × High knowledge	0.46	0.24	0.36	0.24	0.14	0.13
Coefficient: Advice+Welfare + Advice+Welfare × High knowledge	-0.016	0.12	-0.0057	-0.027	0.0069	-0.0057
p-value: Advice+Welfare + Advice+Welfare × High knowledge	0.36	0.75	0.71	0.95	0.79	0.96
N	17064	17064	14123	14123	2914	2914
Control Mean	0.263	5.307	0.125	6.391	0.915	0.209

▸ Average effects ▸ HH level

◂ Back

Heterogeneity by knowledge: ECS

	Any Advice	Advice: Purchase insurance	Advice: Do not purchase insurance
	(1)	(2)	(3)
Advice+Sales	15.084	15.132	2.300
	(0.134)	(0.189)	(0.679)
Advice+Welfare	15.825	9.291	10.374***
	(0.129)	(0.450)	(0.00788)
Advice+Sales × High IBLI knowledge	-35.746*	-41.248*	-9.766
	(0.0919)	(0.0862)	(0.432)
Advice+Welfare × High IBLI knowledge	-6.467	1.080	-5.993
	(0.763)	(0.965)	(0.342)
Coefficient: Advice+Sales + Advice+Sales × High knowledge	-20.7	-26.1	-7.47
p-value: Advice+Sales + Advice+Sales × High knowledge	0.21	0.17	0.39
Coefficient: Advice+Welfare + Advice+Welfare × High knowledge	9.36	10.4	4.38
p-value: Advice+Welfare + Advice+Welfare × High knowledge	0.57	0.59	0.46
N	16947	13726	2878
Control Mean	-233.5	-284.5	-20.72

▸ Average effects ▸ HH level

◂ Back

Example advice: Advice to purchase insurance

Our calculation based on your personal situation indicated that PURCHASING IBLI for 1 cows is the best advice.



Our calculation based on your personal situation indicated that PURCHASING IBLI for 4 goats is the best advice.



◂ Back

Example advice: Advice not to purchase insurance

Our calculation based on your personal situation indicated that NOT PURCHASE IBLI for cows is the best advice.



Our calculation based on your personal situation indicated that NOT PURCHASE IBLI for goats is the best advice.



Our calculation based on your personal situation indicated that NOT PURCHASE IBLI for sheep is the best advice.



◂ Back

Example advice: Indeterminate Advice

Our calculations based on your personal situation did not indicate whether PURCHASE or NOT PURCHASE IBLI for cows is a better advice. Therefore we will refrain from providing advice.

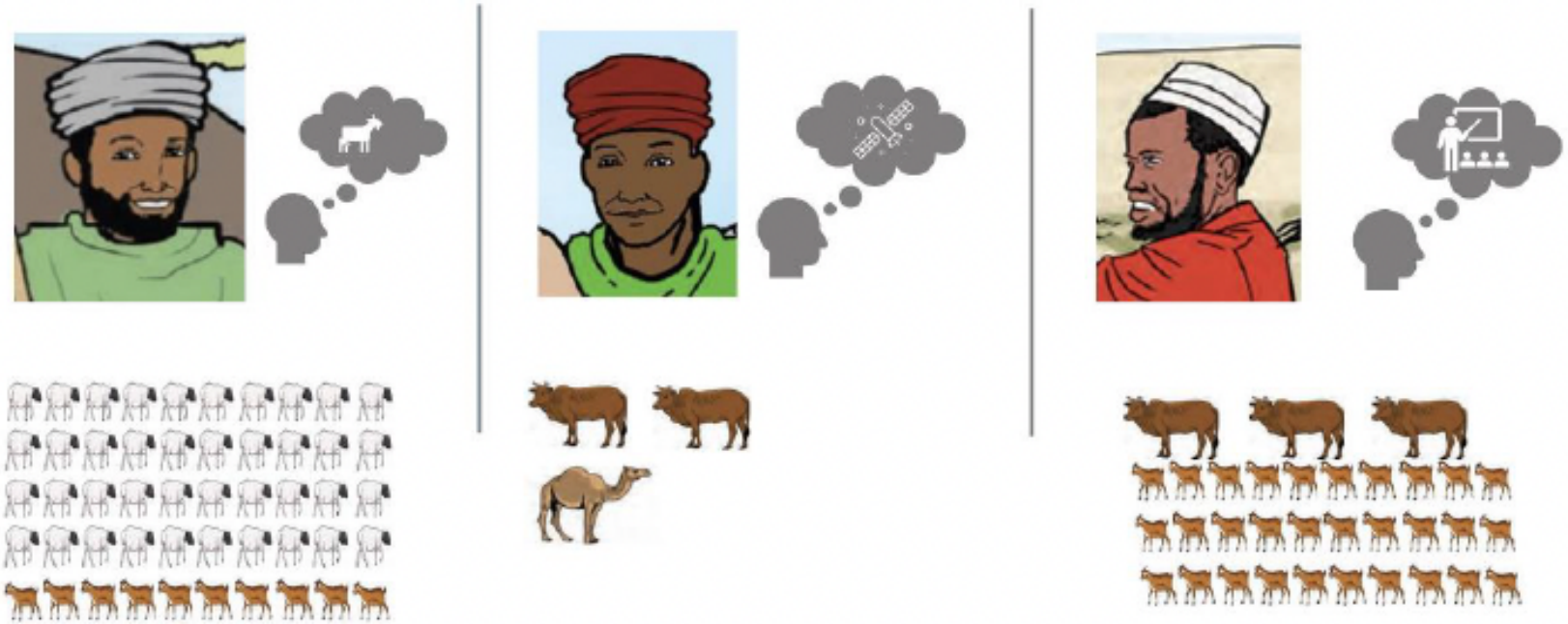


Our calculations based on your personal situation did not indicate whether PURCHASE or NOT PURCHASE IBLI for goats is a better advice. Therefore we will refrain from providing advice.



Back

Video Screen



Back

Balance on Herder Baseline Characteristics

	Control		Advice+Sales		Advice+Welfare		Advice+Sales vs. Control		Advice+Welfare vs. Control		Advice+Sales vs. Advice+Welfare	
	Mean	SD	Mean	SD	Mean	SD	Diff	Normalized Diff	Diff	Normalized Diff	Diff	Normalized Diff
Respondent age in years	43.3	[16.1]	43.7	[16.4]	43.4	[16.4]	0.439	{0.027}	0.084	{0.008}	-0.369	{-0.019}
Female	0.378	[0.485]	0.376	[0.485]	0.385	[0.487]	-0.002	{-0.004}	0.008	{0.016}	0.010	{0.019}
Married	0.870	[0.337]	0.879	[0.326]	0.874	[0.332]	0.009	{0.028}	0.005	{0.013}	-0.004	{-0.015}
N of household members	5.78	[2.30]	5.81	[2.31]	5.82	[2.20]	0.040	{0.017}	0.058	{0.022}	0.017	{0.005}
Literate in any language	0.194	[0.396]	0.222	[0.416]	0.215	[0.411]	0.029	{0.069}	0.023	{0.051}	-0.006	{-0.018}
Years of education	1.32	[3.20]	1.39	[3.21]	1.45	[3.27]	0.077	{0.024}	0.139	{0.041}	0.060	{0.017}
Traditional religion	0.655	[0.476]	0.658	[0.475]	0.664	[0.473]	0.003	{0.007}	0.008	{0.020}	0.004	{0.013}
Animals owned or herded (TLU)	13.5	[20.8]	12.7	[15.2]	13.3	[21.8]	-0.855	{-0.048}	-0.189	{-0.010}	0.664	{0.034}
Animal loss (TLU)	1.91	[5.02]	1.94	[4.43]	1.75	[3.29]	0.037	{0.008}	-0.166	{-0.038}	-0.193	{-0.051}
Livestock input expenditure (ETB)	5618.3	[10287.6]	5235.0	[8558.1]	5427.8	[10665.8]	-387.9	{-0.041}	-205.4	{-0.018}	189.4	{0.020}
Has land cultivation right	0.474	[0.500]	0.494	[0.500]	0.505	[0.500]	0.022	{0.041}	0.035*	{0.063}	0.013	{0.021}
Heard of IBLI	0.338	[0.473]	0.342	[0.475]	0.307	[0.462]	0.004	{0.009}	-0.032*	{-0.065}	-0.035**	{-0.074}
IBLI knowledge score (1-9, 9 Highest)	1.68	[2.90]	1.75	[2.98]	1.57	[2.81]	0.072	{0.023}	-0.106	{-0.037}	-0.176*	{-0.060}
Ever purchased IBLI	0.086	[0.280]	0.100	[0.300]	0.091	[0.288]	0.014	{0.049}	0.006	{0.020}	-0.008	{-0.029}
P-value of Joint F-test:								0.442		0.455		0.455

Back

Balance on Insurance agents' Baseline Characteristics

	Control		Advice+Sales		Advice+Welfare		Advice+Sales vs. Control		Advice+Welfare vs. Control		Advice+Sales vs. Advice+Welfare	
	Mean	SD	Mean	SD	Mean	SD	Diff	Normalized Diff	Diff	Normalized Diff	Diff	Normalized Diff
Agents' impression on herders' IBLI knowledge	6.03	[2.15]	6.08	[2.04]	5.83	[2.09]	0.053	{0.025}	-0.201	{-0.095}	-0.254	{-0.123}
Agent's expectation about index triggered	5.40	[3.33]	5.29	[3.27]	5.44	[3.01]	-0.112	{-0.034}	0.038	{0.012}	0.150	{0.048}
Years worked as insurance agent in the village	3.35	[3.10]	3.39	[3.08]	3.36	[3.14]	0.037	{0.012}	0.012	{0.004}	-0.025	{-0.008}
Never visited this village before	0.150	[0.359]	0.150	[0.359]	0.125	[0.333]	0.000	{0}	-0.025	{-0.072}	-0.025	{-0.072}
Have a family member in this village	0.380	[0.488]	0.375	[0.487]	0.412	[0.495]	-0.006	{-0.010}	0.031	{0.067}	0.038	{0.076}
Received something from respondents	0.100	[0.302]	0.100	[0.302]	0.125	[0.333]	0.000	{0}	0.025	{0.079}	0.025	{0.079}
Gave something to respondents	0.188	[0.393]	0.188	[0.393]	0.150	[0.359]	0.000	{0}	-0.037	{-0.100}	-0.037	{-0.100}
P-value of Joint F-test:								0.999		0.182		0.224

◂ Back

Balance on the tailored advice itself

The *advice* does not differ across arms – so $\beta_2 - \beta_1$ holds the information environment fixed.

	Advice to purchase	Advised number of animals
	(1)	(2)
Advice+Sales vs. Control	−0.004	−0.017
	(0.620)	(0.939)
	[0.715]	[0.948]
Advice+Welfare vs. Control	−0.008	−0.018
	(0.351)	(0.939)
	[0.484]	[0.956]
Welfare vs. Sales $(\beta_2 - \beta_1)$	−0.004	−0.001
	(0.648)	(0.996)
	[0.514]	[0.997]
Model	Logit	OLS
N	17,064	15,325
Control mean	0.825	6.221

Back

Attrition

- We do not have households attrited throughout 4 rounds.
- Very limited changes in respondents within the households – maximum 6.8%, not differential by treatment.

	Midline 1	Midline 2	Endline
	(1)	(2)	(3)
N of households changed respondents	165	11	1
% of households changed respondents	6.8%	0.5%	0.04%

Back

Did respondent purchase insurance or not – HH level?

	IBLI purchase=1	TLU insured	TLU insured | Purchase=1
	(1)	(2)	(3)
Advice+Sales vs. Control	-0.013	0.014	0.030
	(0.254)	(0.824)	(0.891)
	[0.353]	[0.866]	[0.919]
Advice+Welfare vs. Control	-0.019*	-0.062	-0.187
	(0.0734)	(0.290)	(0.391)
	[0.126]	[0.336]	[0.521]
Advice+Sales vs. Advice+Welfare	-0.007	-0.076	-0.217
	(0.445)	(0.137)	(0.393)
	[0.304]	[0.239]	[0.281]
N	6686	6686	1295
Control Mean	0.219	0.610	2.792

◂ Back ▸ Kebele-Round FE

Did respondent follow the advised number of animals?

	|Advised N of livestock to insure - N of Insured livestock|		
	Any advice	Advised to purchase insurance	Advised NOT to purchase insurance
	(1)	(2)	(3)
Advice+Sales vs. Control	-0.009	-0.002	-0.009
	(0.967)	(0.994)	(0.858)
	[0.972]	[0.994]	[0.883]
Advice+Welfare vs. Control	-0.043	0.016	-0.067
	(0.840)	(0.946)	(0.144)
	[0.870]	[0.946]	[0.237]
Advice+Sales vs. Advice+Welfare	-0.035	0.018	-0.058
	(0.851)	(0.931)	(0.150)
	[0.790]	[0.850]	[0.150]
N	17064	14539	2499
Control Mean	5.307	6.189	0.236

- Control mean: Hypothetical advice that control group would have received.

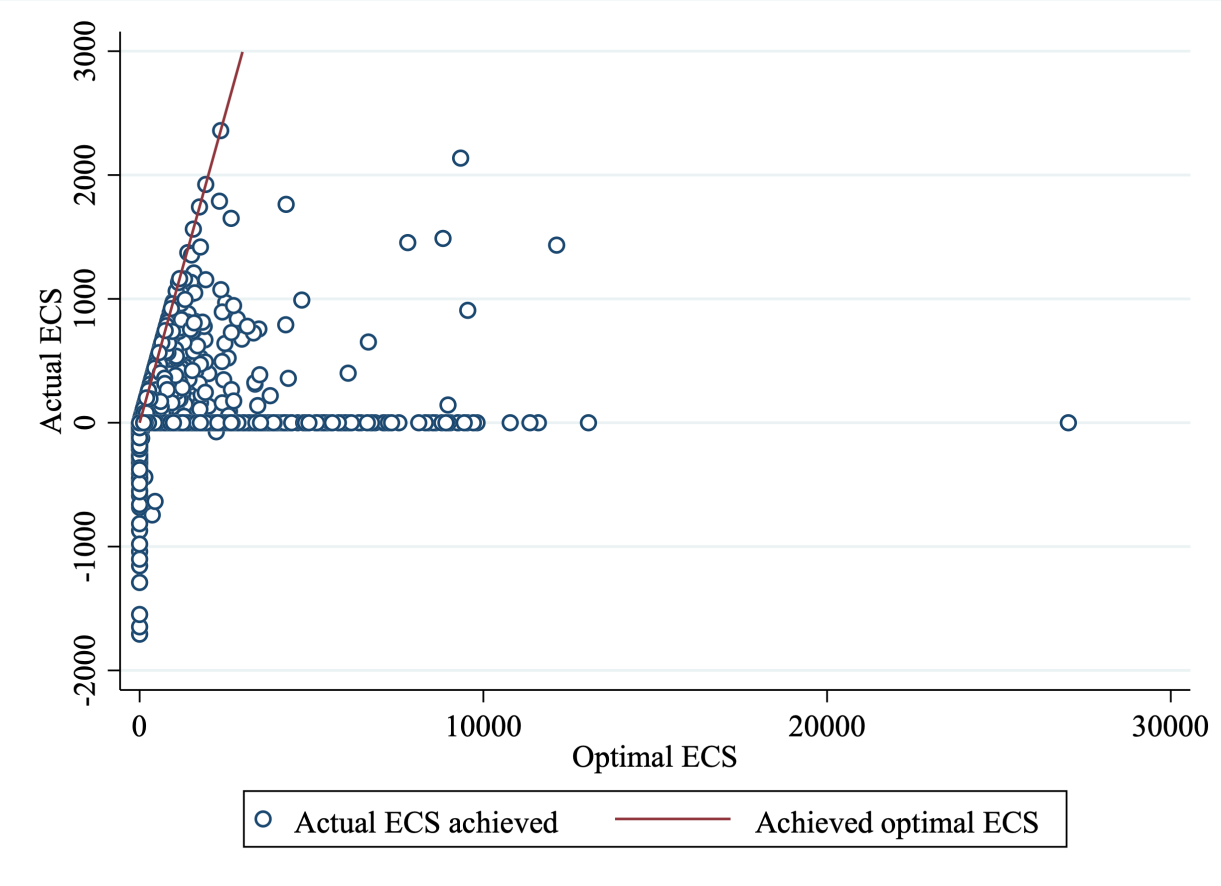
Back

Did respondent follow the advice – HH level?

	Any advice	Advised to purchase insurance	Advised NOT to purchase insurance
	(1)	(2)	(3)
Advice+Sales vs. Control	-0.002	-0.007	0.019
	(0.869)	(0.552)	(0.178)
	[0.912]	[0.608]	[0.351]
Advice+Welfare vs. Control	0.000	-0.007	0.024*
	(0.980)	(0.576)	(0.0878)
	[0.983]	[0.669]	[0.221]
Advice+Sales vs. Advice+Welfare	0.002	0.000	0.006
	(0.831)	(0.978)	(0.623)
	[0.759]	[0.972]	[0.634]
N	6505	5672	1064
Control Mean	0.340	0.209	0.951

Back

ECS from actual decision vs. ECS from optimal decision



▸ ECS ◂ Back

ECS: $CE_{decision} - CE_{optimal}$ – HH level

	Any Advice	Advice: Purchase insurance	Advice: Do not purchase insurance
	(1)	(2)	(3)
Advice+Sales vs. Control	-25.299	-24.665	-0.634
	(0.312)	(0.323)	(0.685)
	[0.400]	[0.408]	[0.777]
Advice+Welfare vs. Control	-5.533	-7.989	2.456*
	(0.828)	(0.754)	(0.0727)
	[0.868]	[0.815]	[0.0740]
Advice+Sales vs. Advice+Welfare	19.766	16.676	3.090**
	(0.434)	(0.510)	(0.0371)
	[0.533]	[0.562]	[0.0720]
N	6686	6686	6686
Control Mean	-587.7	-582.4	-5.270

▸ ECS ▸ Species level ▸ By trust toward VIP ▸ Kebele-Round FE

◂ Back

Heterogeneity across trust in agents: IBLI purchase at HH level

	IBLI purchase=1	TLU insured	TLU insured | Purchase=1
	(1)	(2)	(3)
Advice+Sales	-0.025**	-0.005	0.217
	(0.0373)	(0.943)	(0.390)
Advice+Welfare	-0.028**	-0.110	-0.195
	(0.0121)	(0.103)	(0.382)
Advice+Sales × High trust in agent	0.033	0.050	-0.610
	(0.151)	(0.695)	(0.112)
Advice+Welfare × High trust in agent	0.020	0.144	0.002
	(0.392)	(0.309)	(0.997)
Coefficient: Advice+Sales + Advice+Sales × High trust	0.0084	0.045	-0.39
p-value: Advice+Sales + Advice+Sales × High trust	0.70	0.68	0.26
Coefficient: Advice+Welfare + Advice+Welfare × High trust	-0.0076	0.033	-0.19
p-value: Advice+Welfare + Advice+Welfare × High trust	0.73	0.78	0.66
N	6670	6670	1295
Control Mean	0.219	0.610	2.792

Back

Heterogeneity across trust in agents: Adherence to advice at HH level

	Any advice		Advised to purchase		Advised not to purchase	
	Adhere to any of the advice=1	|Purchase - Advice| (TLU)	Adhere to any of the advice=1	|Purchase - Advice| (TLU)	Adhere to any of the advice=1	|Purchase - Advice| (TLU)
	(1)	(2)	(3)	(4)	(5)	(6)
Advice+Sales	-0.022*	0.309	-0.018	0.250	0.008	-0.001
	(0.0764)	(0.415)	(0.161)	(0.530)	(0.469)	(0.908)
Advice+Welfare	-0.008	0.344	-0.014	0.308	0.006	-0.016**
	(0.529)	(0.273)	(0.289)	(0.358)	(0.599)	(0.0399)
Advice+Sales × High trust in agent	0.054**	-0.056	0.033	-0.219	-0.001	0.054*
	(0.0449)	(0.948)	(0.201)	(0.812)	(0.955)	(0.0946)
Advice+Welfare × High trust in agent	0.037	-1.270	0.020	-1.487*	0.036*	0.037*
	(0.185)	(0.108)	(0.453)	(0.0696)	(0.0998)	(0.0764)
Coefficient: Advice+Sales + Advice+Sales × High trust	0.032	0.25	0.015	0.031	0.0070	0.053
p-value: Advice+Sales + Advice+Sales × High trust	0.18	0.71	0.53	0.97	0.68	0.058
Coefficient: Advice+Welfare + Advice+Welfare × High trust	0.029	-0.93	0.0063	-1.18	0.042	0.021
p-value: Advice+Welfare + Advice+Welfare × High trust	0.24	0.17	0.80	0.091	0.023	0.24
N	6503	2388	5474	2214	1206	6634
Control Mean	0.364	2.877	0.215	2.792	0.966	0.0261

◂ Back

Heterogeneity across trust in agents: ECS rel. to optimal ECS, at HH level

	Any Advice	Advice: Purchase insurance	Advice: Do not purchase insurance
	(1)	(2)	(3)
Advice+Sales	15.686	15.305	1.095
	(0.650)	(0.656)	(0.688)
Advice+Welfare	2.989	-1.185	4.409*
	(0.934)	(0.974)	(0.0637)
Advice+Sales × High trust in agent	-139.665*	-132.542*	-7.488
	(0.0658)	(0.0775)	(0.308)
Advice+Welfare × High trust in agent	-30.296	-23.663	-4.825
	(0.631)	(0.708)	(0.265)
Coefficient: Advice+Sales + Advice+Sales × High trust	-124.0	-117.2	-6.39
p-value: Advice+Sales + Advice+Sales × High trust	0.032	0.040	0.28
Coefficient: Advice+Welfare + Advice+Welfare × High trust	-27.3	-24.8	-0.42
p-value: Advice+Welfare + Advice+Welfare × High trust	0.54	0.57	0.90
N	6670	6670	6670
Control Mean	-594.1	-578.5	-9.175

▸ Average effects ▸ Species level

◂ Back

Individual Knowledge Questions

	Premiium payment frequency (=1)	Refund premium in case there is no drought	Format of receiving payment	IBLI convered list	Payout-triggering measure-ments	Index upon which com-pensation is made
	(1)	(2)	(3)	(4)	(5)	(6)
Advice+Sales vs. Control	0.019	-0.015	0.005	-0.009	-0.002	-0.033**
	(0.117)	(0.361)	(0.654)	(0.498)	(0.905)	(0.0277)
	[0.166]	[0.419]	[0.687]	[0.529]	[0.921]	[0.0670]
Advice+Welfare vs. Control	0.014	-0.021	0.013	0.007	0.007	-0.021
	(0.253)	(0.194)	(0.275)	(0.642)	(0.601)	(0.158)
	[0.321]	[0.264]	[0.359]	[0.715]	[0.652]	[0.233]
Advice+Sales vs. Advice+Welfare	-0.005	-0.006	0.008	0.016	0.009	0.012
	(0.632)	(0.677)	(0.415)	(0.158)	(0.462)	(0.383)
	[0.778]	[0.535]	[0.293]	[0.419]	[0.426]	[0.820]
N	4270	4270	4270	4270	4270	4270
Control Mean	0.279	0.573	0.841	0.692	0.614	0.527

◂ Back ▸ Poisson Regression

Individual Knowledge Questions, Poisson regression

	Premiium payment frequency (=1)	Refund premium in case there is no drought	Format of receiving payment	IBLI covered risks	Payout-triggering measure-ments	Index upon which com-pensation is made	Payout delivering orgnizations	Payout scenario 1	Payout scenario 2	Payout scenario 3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Advice+Sales vs. Control	0.011	-0.018	0.001	-0.009	-0.023	-0.053**	-0.002	-0.035*	-0.003	-0.029
	(0.749)	(0.433)	(0.950)	(0.607)	(0.259)	(0.0343)	(0.935)	(0.0673)	(0.875)	(0.213)
Advice+Welfare vs. Control	0.003	-0.022	0.008	0.001	-0.008	-0.040	0.009	-0.014	0.010	-0.028
	(0.938)	(0.346)	(0.533)	(0.954)	(0.684)	(0.117)	(0.678)	(0.461)	(0.589)	(0.230)
N	9095	9095	9095	9095	9095	9095	9095	9095	9095	9095
Control Mean	0.279	0.408	0.582	0.482	0.430	0.325	0.424	0.461	0.477	0.343

◂ Back ▸ OLS

Did respondent purchase insurance or not? Kebele and Round FE

	IBLI purchase=1	N of animals insured	N of animals insured |Purchase=1
	(1)	(2)	(3)
Advice+Sales vs. Control	-0.003	-0.012	-0.030
	(0.449)	(0.639)	(0.884)
Advice+Welfare vs. Control	-0.010**	-0.022	0.356
	(0.0344)	(0.423)	(0.154)
Advice+Sales vs. Advice+Welfare	-0.006*	-0.009	0.386
	(0.0668)	(0.657)	(0.104)
N	26744	26744	1915
Control Mean	0.0818	0.312	3.812

Back

Did respondent purchase insurance or not? – HH level; Kebele and Round FE

	IBLI purchase=1	TLU insured	TLU insured | Purchase=1
	(1)	(2)	(3)
Advice+Sales vs. Control	-0.013	0.013	0.019
	(0.261)	(0.828)	(0.930)
Advice+Welfare vs. Control	-0.019*	-0.063	-0.161
	(0.0819)	(0.287)	(0.466)
Advice+Sales vs. Advice+Welfare	-0.007	-0.076	-0.180
	(0.450)	(0.133)	(0.479)
N	6686	6686	1301
Control Mean	0.219	0.610	2.792

Back

Did respondent follow the advice? – Kebele and Round FE

	Any advice		Advised to purchase		Advised not to purchase	
	Adhere to advice=1	|Purchase - Advice|	Adhere to advice=1	|Purchase - Advice|	Adhere to advice=1	|Purchase - Advice|
	(1)	(2)	(3)	(4)	(5)	(6)
Advice+Sales vs. Control	-0.005	-0.027	-0.011	-0.008	0.009	0.015
	(0.582)	(0.899)	(0.147)	(0.976)	(0.288)	(0.744)
Advice+Welfare vs. Control	0.000	-0.036	-0.011	0.009	0.027***	-0.073*
	(0.970)	(0.868)	(0.117)	(0.972)	(0.00141)	(0.0763)
Advice+Sales vs. Advice+Welfare	0.005	-0.009	-0.001	0.016	0.018**	-0.087**
	(0.465)	(0.961)	(0.872)	(0.940)	(0.0285)	(0.0362)
N	17064	17064	14123	14123	2941	2941
Control Mean	0.263	5.307	0.125	6.391	0.915	0.209

Back

ECS: $CE_{decision} - CE_{optimal}$ – Kebele and Round FE

	Any Advice	Advice: Purchase insurance	Advice: Do not purchase insurance
	(1)	(2)	(3)
Advice+Sales vs. Control	-0.155	-1.258	-2.462
	(0.987)	(0.910)	(0.587)
Advice+Welfare vs. Control	13.279	9.090	8.486**
	(0.186)	(0.425)	(0.0387)
Advice+Sales vs. Advice+Welfare	13.434	10.348	10.948**
	(0.134)	(0.310)	(0.0119)
N	16630	13726	2904
Control Mean	-243.1	-291.5	-21.22

Back

ECS: $CE_{decision} - CE_{optimal}$ – HH level; Kebele and round FE

	Any Advice	Advice: Purchase insurance	Advice: Do not purchase insurance
	(1)	(2)	(3)
Advice+Sales vs. Control	-25.582	-24.385	-1.198
	(0.340)	(0.360)	(0.569)
Advice+Welfare vs. Control	-5.718	-8.611	2.893
	(0.834)	(0.752)	(0.157)
Advice+Sales vs. Advice+Welfare	19.864	15.773	4.091**
	(0.439)	(0.538)	(0.0334)
N	6686	6686	6686
Control Mean	-587.7	-578.5	-9.175

Back

ECS: $CE_{decision} - CE_{optimal}$ – Winsorized values

	Any Advice				Advice: Purchase insurance				Advice: Do not purchase insurance			
	No winsor	1%	5%	10%	No winsor	1%	5%	10%	No winsor	1%	5%	10%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Advice+Sales vs. Control	0.625	4.544	5.665	5.679	-1.378	3.488	5.094	5.274	-1.665	-0.175	-0.252	-0.552
	(0.945)	(0.559)	(0.377)	(0.305)	(0.895)	(0.696)	(0.484)	(0.399)	(0.645)	(0.955)	(0.906)	(0.746)
Advice+Welfare vs. Control	14.598	14.032*	11.875*	10.636*	10.387	10.192	8.486	7.568	6.565*	6.191**	3.749*	2.497
	(0.108)	(0.0780)	(0.0709)	(0.0596)	(0.324)	(0.266)	(0.258)	(0.239)	(0.0611)	(0.0484)	(0.0802)	(0.143)
Advice+Sales vs. Advice+Welfare	13.973	9.489	6.209	4.957	11.765	6.704	3.392	2.294	8.230**	6.365*	4.001*	3.049*
	(0.113)	(0.192)	(0.291)	(0.319)	(0.239)	(0.415)	(0.604)	(0.677)	(0.0488)	(0.0531)	(0.0533)	(0.0766)
N	16947	16947	16947	16947	14135	14135	14135	14135	2470	2470	2470	2470
Control Mean	-239.1	-233.5	-217.4	-200.5	-283.8	-277.0	-258.1	-238.2	-14.44	-14.32	-12.04	-10.36

◂ Back

Did respondent purchase insurance or not? – By round

	IBLI purchase=1				N of animals insured				N of animals insured |Purchase=1			
	All rounds	R2	R3	R4	All rounds	R2	R3	R4	All rounds	R2	R3	R4
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Advice+Sales vs. Control	-0.003	-0.003	-0.002	-0.009	-0.012	0.003	-0.035	-0.008	0.002	-0.166	0.019	0.103
	(0.439)	(0.570)	(0.770)	(0.242)	(0.640)	(0.918)	(0.473)	(0.760)	(0.992)	(0.652)	(0.935)	(0.790)
Advice+Welfare vs. Control	-0.010**	-0.009*	-0.008	-0.016**	-0.022	-0.026	-0.004	-0.039	0.354	-0.170	0.673**	0.018
	(0.0277)	(0.0569)	(0.215)	(0.0450)	(0.409)	(0.330)	(0.933)	(0.163)	(0.156)	(0.601)	(0.0250)	(0.960)
Advice+Sales vs. Advice+Welfare	-0.006*	-0.006	-0.006	-0.007	-0.009	-0.028	0.031	-0.031*	0.352	-0.004	0.654**	-0.085
	(0.0617)	(0.164)	(0.319)	(0.101)	(0.649)	(0.202)	(0.504)	(0.0804)	(0.140)	(0.992)	(0.0261)	(0.811)
N	26744	9664	9664	7416	26744	9664	9664	7416	1909	471	1098	340
Control Mean	0.0818	0.0534	0.117	0.0576	0.312	0.144	0.527	0.152	3.812	2.703	4.489	2.643

◂ Back

Did respondent follow the Tailored Advice? – Extensive margin; By round

	Any advice				Advised to purchase insurance				Advised NOT to purchase insurance			
	All rounds	R2	R3	R4	All rounds	R2	R3	R4	All rounds	R2	R3	R4
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Advice+Sales vs. Control	-0.006	-0.007	-0.009	0.011	-0.008	-0.007	-0.007	-0.015	0.006	0.006	-0.004	0.011
	(0.458)	(0.608)	(0.360)	(0.553)	(0.270)	(0.440)	(0.485)	(0.189)	(0.517)	(0.501)	(0.930)	(0.819)
Advice+Welfare vs. Control	0.001	-0.004	-0.002	0.020	-0.011	-0.010	-0.008	-0.020*	0.021**	0.019**	0.042	0.028
	(0.903)	(0.815)	(0.831)	(0.236)	(0.128)	(0.281)	(0.382)	(0.0800)	(0.0232)	(0.0411)	(0.271)	(0.531)
Advice+Sales vs. Advice+Welfare	0.007	0.004	0.007	0.010	-0.003	-0.003	-0.001	-0.005	0.015*	0.012	0.046	0.017
	(0.320)	(0.799)	(0.449)	(0.389)	(0.583)	(0.715)	(0.878)	(0.438)	(0.0889)	(0.174)	(0.241)	(0.369)
N	17062	6079	6493	4490	14121	3924	6306	3891	2914	2154	170	590
Control Mean	0.263	0.381	0.181	0.158	0.125	0.0831	0.162	0.0785	0.915	0.928	0.790	0.889

Back

ECS: $CE_{decision} - CE_{optimal}$ – By round

	Any Advice				Advice: Purchase insurance				Advice: Do not purchase insurance			
	All rounds	R2	R3	R4	All rounds	R2	R3	R4	All rounds	R2	R3	R4
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Advice+Sales vs. Control	0.625	4.382	16.358	-31.995	-1.527	6.468	16.429	-50.483	-3.689	-2.603	-5.350	-8.041
	(0.945)	(0.306)	(0.299)	(0.259)	(0.886)	(0.216)	(0.305)	(0.112)	(0.409)	(0.591)	(0.263)	(0.461)
Advice+Welfare vs. Control	14.598	3.199	20.047	9.643	10.165	1.923	14.874	-10.158	8.564**	8.110*	2.151	9.990
	(0.108)	(0.459)	(0.219)	(0.734)	(0.347)	(0.721)	(0.360)	(0.750)	(0.0358)	(0.0613)	(0.581)	(0.301)
Advice+Sales vs. Advice+Welfare	13.973	-1.183	3.690	41.638**	11.692	-4.544	-1.555	40.325*	12.253***	10.713**	7.501*	18.031
	(0.113)	(0.768)	(0.811)	(0.0393)	(0.253)	(0.371)	(0.919)	(0.0709)	(0.00668)	(0.0162)	(0.0695)	(0.178)
N	16947	6295	6210	4442	13726	3881	5993	3852	2878	2133	167	578
Control Mean	-239.1	-55.41	-373.7	-432.4	-291.5	-76.42	-384.7	-477.8	-21.22	-21.93	-12.23	-22.26

◂ Back

Did respondent purchase insurance or not? – By species

	IBLI purchase=1					N of animals insured					N of animals insured |Purchase=1			
	All species	Camel	Cattle	Goat	Sheep	All species	Camel	Cattle	Goat	Sheep	All species	Camel	Cattle	Goat
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Advice+Sales vs. Control	-0.007	0.004	-0.001	-0.021**	-0.000	-0.030	-0.030	0.036	-0.107	-0.000	-0.066	0.214	0.126	-0.178
	(0.273)	(0.751)	(0.905)	(0.0208)	(0.956)	(0.423)	(0.590)	(0.516)	(0.155)	(0.956)	(0.774)	(0.370)	(0.515)	(0.651)
Advice+Welfare vs. Control	-0.013**	0.001	-0.016	-0.024**	0.001	-0.024	-0.021	-0.039	-0.022	0.001	0.367	-0.147	0.036	0.841*
	(0.0430)	(0.935)	(0.155)	(0.0125)	(0.156)	(0.531)	(0.743)	(0.468)	(0.791)	(0.156)	(0.148)	(0.712)	(0.876)	(0.0780)
Advice+Sales vs. Advice+Welfare	-0.006	-0.003	-0.014*	-0.003	0.001	0.006	0.009	-0.075	0.085	0.001	0.432*	-0.362	-0.090	1.019**
	(0.227)	(0.811)	(0.0976)	(0.653)	(0.162)	(0.844)	(0.781)	(0.129)	(0.179)	(0.162)	(0.0883)	(0.184)	(0.655)	(0.0483)
N	17381	1829	5669	5823	4052	17381	1829	5669	5823	4052	1735	76	806	822
Control Mean	0.116	0.0581	0.160	0.168	0	0.451	0.145	0.498	0.808	0	3.896	2.500	3.117	4.799

◂ Back

Did Tailored Advice change trust in agents? – Ordered probit

	Agents advise in my best interests	Agents' advice is important	Agents deliver premium to insurer	I will receive entitled payment
	(1)	(2)	(3)	(4)
Advice+Sales vs. Control				
Low	0.023***	0.020**	0.009	0.013*
	(0.00347)	(0.0134)	(0.315)	(0.0927)
Medmium	0.004***	0.003**	0.001	0.001
	(0.00471)	(0.0184)	(0.327)	(0.147)
High	-0.028***	-0.024**	-0.009	-0.014*
	(0.00342)	(0.0136)	(0.315)	(0.0933)
Advice+Welfare vs. Control				
Low	0.025***	0.018**	0.004	0.016**
	(0.00121)	(0.0242)	(0.590)	(0.0477)
Medmium	0.005***	0.003**	0.000	0.001*
	(0.00294)	(0.0340)	(0.599)	(0.0903)
High	-0.029***	-0.021**	-0.005	-0.017**
	(0.00129)	(0.0249)	(0.591)	(0.0478)
N	6686	6686	6686	6686
Control Mean	5.977	5.967	5.734	5.645

▸ OLS

Did Tailored Advice change trust in agents? – Negative binomial

	Composite trust scale	Agents advise in my best interests	Agents' advice is important	Agents deliver premium to insurer	I will receive entitled payment
	(1)	(2)	(3)	(4)	(5)
main					
Advice+Sales vs. Control	-0.022**	-0.033***	-0.032***	-0.015	-0.008
	(0.0171)	(0.00227)	(0.00365)	(0.151)	(0.425)
Advice+Welfare vs. Control	-0.017*	-0.022**	-0.015	-0.017	-0.014
	(0.0536)	(0.0296)	(0.149)	(0.103)	(0.159)
N	6686	6686	6686	6686	6686
Control Mean	5.831	5.977	5.967	5.734	5.645

▸ OLS

◂ Back

What drives the benchmark and the advice?

Shapley decomposition: share of explained variation (R^2) attributable to each ECS input.

	Pre-computed ECS	Advice to purchase	Advised number of animals	Expected consumer surplus
	(1)	(2)	(3)	(4)
Risk aversion	0.166	0.0220	0.000804	0.143
Herd size	0.246	0.00473	**0.985**	0.266
Index trigger belief	**0.574**	**0.947**	0.0126	**0.576**
Herd loss belief – first season	0.00313	0.0197	0.000774	0.00322
Herd loss belief – second season	0.0102	0.00695	0.000825	0.0117

◂ Back

Calculation of Expected Consumer Surplus: Set up

- A pastoral household with livestock asset value H...
  - ...bears the risk of livestock loss (L) with probability p.
  - ...makes a decision on whether or not to purchase insurance, with premium R.
  - ...receives payout I if they purchased insurance and the index is triggered, which occurs with probability q.
  - ...faces basis risk (r), which reflects a joint probability that the index is not triggered but a loss occurs.
- With insurance, there are four states of the world:

  s_1: (No loss, Index not triggered),

  s_2: (No loss, Index triggered),

  s_3: (Loss, Index not triggered),

  s_4: (Loss, Index triggered)

▸ Tailored Advice Intervention

◂ Back

Calculation of Expected Consumer Surplus: Utility function

- We assume that the individual behaves consistently with EUT, and has a CRRA utility function:

$$u(x_{iazkt}) = \begin{cases} \frac{x_{iazkt}^{1-\theta}}{1-\theta} & \theta \neq 1 \\ ln(x_{iazkt}) & \theta = 1 \end{cases} \tag{3}$$

  where x_{iazkt} is the outcome in each state, for household i with livestock species a in village z in kebele k in round t, and θ is the relative risk aversion parameter of individual j in household i, who is responsible for herd management.
- The expected utility from a decision is given by:

$$EU = pr(s_1) \cdot u_{s_1} + pr(s_2) \cdot u_{s_2} + pr(s_3) \cdot u_{s_3} + pr(s_4) \cdot u_{s_4}$$

▸ Tailored Advice Intervention

Calculation of Expected Consumer Surplus: Payoffs and probabilities

If the household purchases insurance...

- ...the *payoffs* in each state are:

	Index not triggered	Index triggered
No loss	$H - R$	$H - R + I$
Loss	$H - L - R$	$H - L - R + I$

- ... the *probabilities* for each state are:

	Index not triggered	Index triggered
No Animal loss	$1 - q - r$	$q + r - p$
Animal loss	r	$p - r$

▸ Tailored Advice Intervention

Certainty equivalents of purchase and non-purchase

Purchasing insurance:

$$EU_{buy} = (1-q-r)\cdot u(H-R) \;+\; r\cdot u(H-L-R) \\ +\; (q+r-p)\cdot u(H-R+I) \;+\; (p-r)\cdot u(H-L-R+I)$$

$$CE_{buy} = \left((1-\theta)\, EU_{buy}\right)^{\frac{1}{1-\theta}}$$

Not purchasing insurance:

$$EU_{nobuy} = (1-q-r)\cdot u(H) \;+\; r\cdot u(H-L) \\ +\; (q+r-p)\cdot u(H) \;+\; (p-r)\cdot u(H-L)$$

$$CE_{nobuy} = \left((1-\theta)\, EU_{nobuy}\right)^{\frac{1}{1-\theta}}$$

Expected consumer surplus from purchasing:

$$ECS_{buy} = CE_{buy} - CE_{nobuy}$$

▸ Tailored Advice Intervention

Did advice change understanding & perceived value of insurance?

	IBLI knowledge score (0-10)	Everyone should buy IBLI if affordable (=1)
	(1)	(2)
Advice+Sales vs. Control	-0.081	-0.005
	(0.287)	(0.675)
	[0.358]	[0.715]
Advice+Welfare vs. Control	-0.009	0.005
	(0.904)	(0.671)
	[0.914]	[0.691]
Advice+Sales vs. Advice+Welfare	0.072	0.011
	(0.286)	(0.337)
	[0.548]	[0.389]
N	4270	4270
Control Mean	4.210	0.673

▸ Knowledge questions

▸ Mechanisms

◂ Back

Did tailored advice affect trust in insurance agents? (By type of advice)

	Advised to buy			Advised not to buy		
	Composite trust scale	Scale for advice-related trust	Scale for money-related trust	Composite trust scale	Scale for advice-related trust	Scale for money-related trust
	(1)	(2)	(3)	(4)	(5)	(6)
Advice+Sales vs. Control	-0.046*	-0.064**	-0.021	-0.059	-0.130**	0.023
	(0.0874)	(0.0246)	(0.411)	(0.390)	(0.0441)	(0.751)
Advice+Welfare vs. Control	-0.046*	-0.038	-0.047*	-0.004	-0.071	0.065
	(0.0809)	(0.169)	(0.0768)	(0.958)	(0.331)	(0.381)
Advice+Sales vs. Advice+Welfare	-0.000	0.026	-0.026	0.055	0.059	0.042
	(0.996)	(0.289)	(0.229)	(0.366)	(0.332)	(0.486)
N	14123	14123	14123	2914	2914	2914
Control Mean	-2.46e-09	4.41e-09	-1.25e-09	-2.46e-09	4.41e-09	-1.25e-09

▸ Trust main table

◂ Back

Lab-in-the-Field Experiment: Agent Recommendation Behavior

- All agents in 240 communities decide whether a randomly selected respondent in that community should purchase insurance.
- **Baseline**: no herder preference revealed, no tailored advice, no incentive.
- **Information varied**:
  - Herder's stated preference (undecided / wants to buy / does not want to buy)
  - Model-based advice (none / buy / do not buy)
- **Incentives varied**: none / sales incentives / welfare-aligned incentives.

▸ Results ◂ Back

Trust in Insurance Agents Declined

- Trust is a 0–10 agreement scale over statements about the agent's reliability and intentions.
- Responses are standardized on the control group's mean and standard deviation.

	Composite trust scale	Scale for advice-related trust	Scale for money-related trust	Agents advise in my best interests	Agents' advice is important	Agents deliver premium to insurer	I will receive entitled payment	Trust the information from agent (=1)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Advice+Sales vs. Control	-0.058**	-0.082***	-0.025	-0.080***	-0.077***	-0.031	-0.016	-0.013*
	(0.0218)	(0.00281)	(0.277)	(0.00338)	(0.00464)	(0.181)	(0.470)	(0.0714)
Advice+Welfare vs. Control	-0.047*	-0.051*	-0.035	-0.057**	-0.040	-0.036	-0.032	-0.016**
	(0.0536)	(0.0532)	(0.121)	(0.0293)	(0.130)	(0.113)	(0.168)	(0.0310)
Advice+Sales vs. Advice+Welfare	0.011	0.031	-0.011	0.023	0.037	-0.005	-0.015	-0.003
	(0.616)	(0.174)	(0.595)	(0.313)	(0.106)	(0.800)	(0.445)	(0.682)
N	6686	6686	6686	6686	6686	6686	6686	6686
Control Mean	-2.46e-09	4.41e-09	-1.25e-09	1.04e-08	5.47e-10	4.17e-09	7.00e-09	0.897

▸ By type of advice ▸ Ordered probit ▸ Negative binomial ◂ Back