

1 Problem

- From technical products to foodstuffs or toothpaste, buyers are often worse informed about vertical product quality than sellers.
- Product testing organizations such as Consumer Reports (US) and Stiftung Warentest (Germany) help buyers by providing credible information.
- However, due to their limited testing capacities, they select only a sample of available product models.
- Under any current selection mechanism, buyers almost always choose suboptimal product models compared to a world of complete information.

Figure 1: Different scenarios

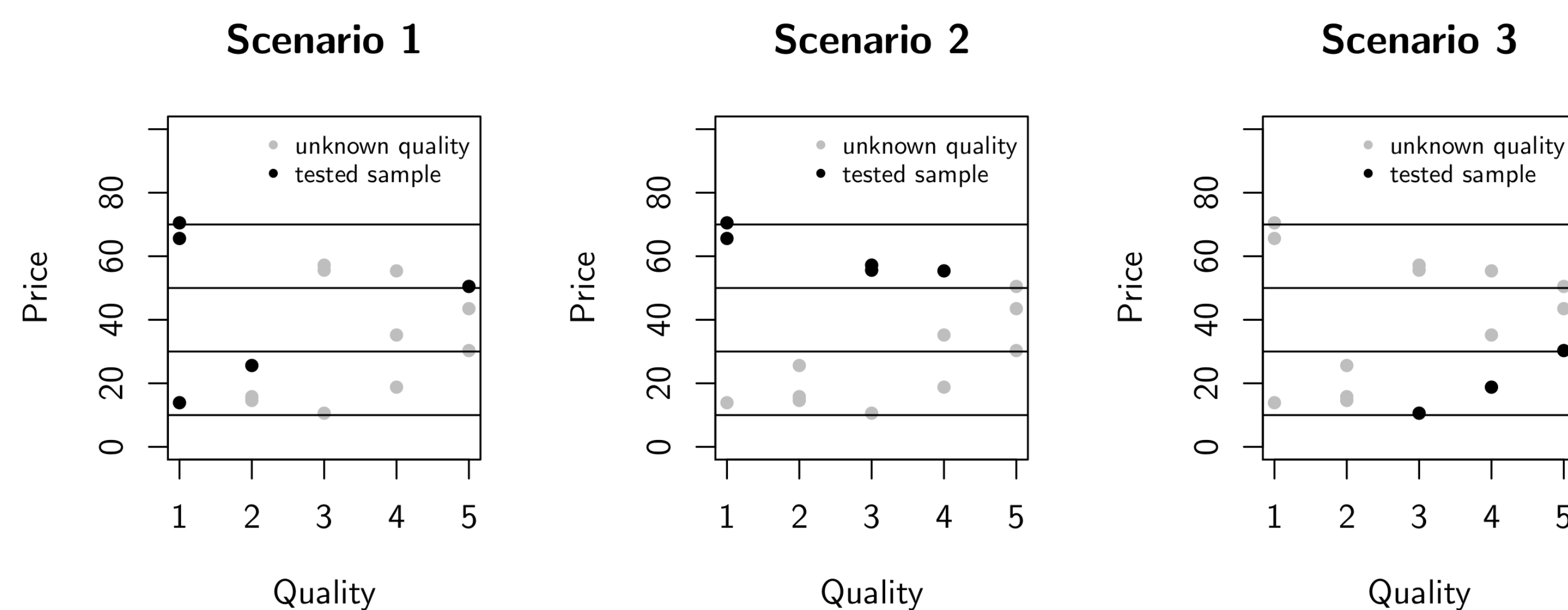


Figure 2: Quality dimensions



- objective quality dimensions
- examples:
 - weight (search characteristic: Nelson, 1970)
 - raincover's waterproofness (experience characteristic: Nelson, 1970)
 - toxic substances (credence characteristic: Darby and Karni, 1973)

2 Solution

2.1 Theory

- We propose a novel, testing capacity-neutral mechanism to select product models based on voluntary disclosure.
- Under our mechanism, all complete-information-optimal product models (or all but the overall cheapest one) are selected for testing, resulting in the maximum possible consumer surplus.
- Therefore, our mechanism weakly dominates any current mechanism to select product models for testing.

2.2 Experiment

- In the lab, we confirm experimentally that our mechanism increases consumer surplus.

Figure 3: Experimental screenshot

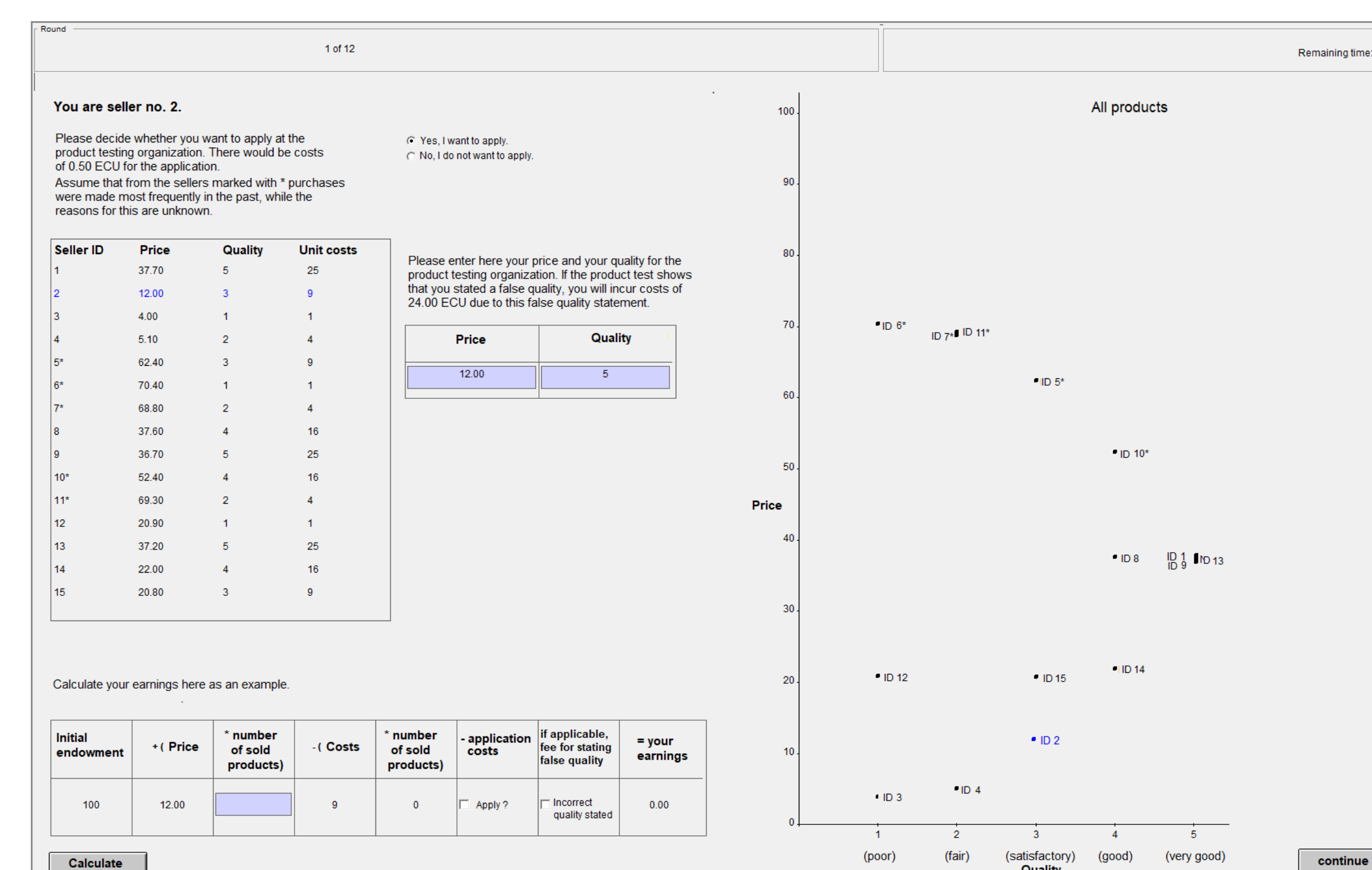
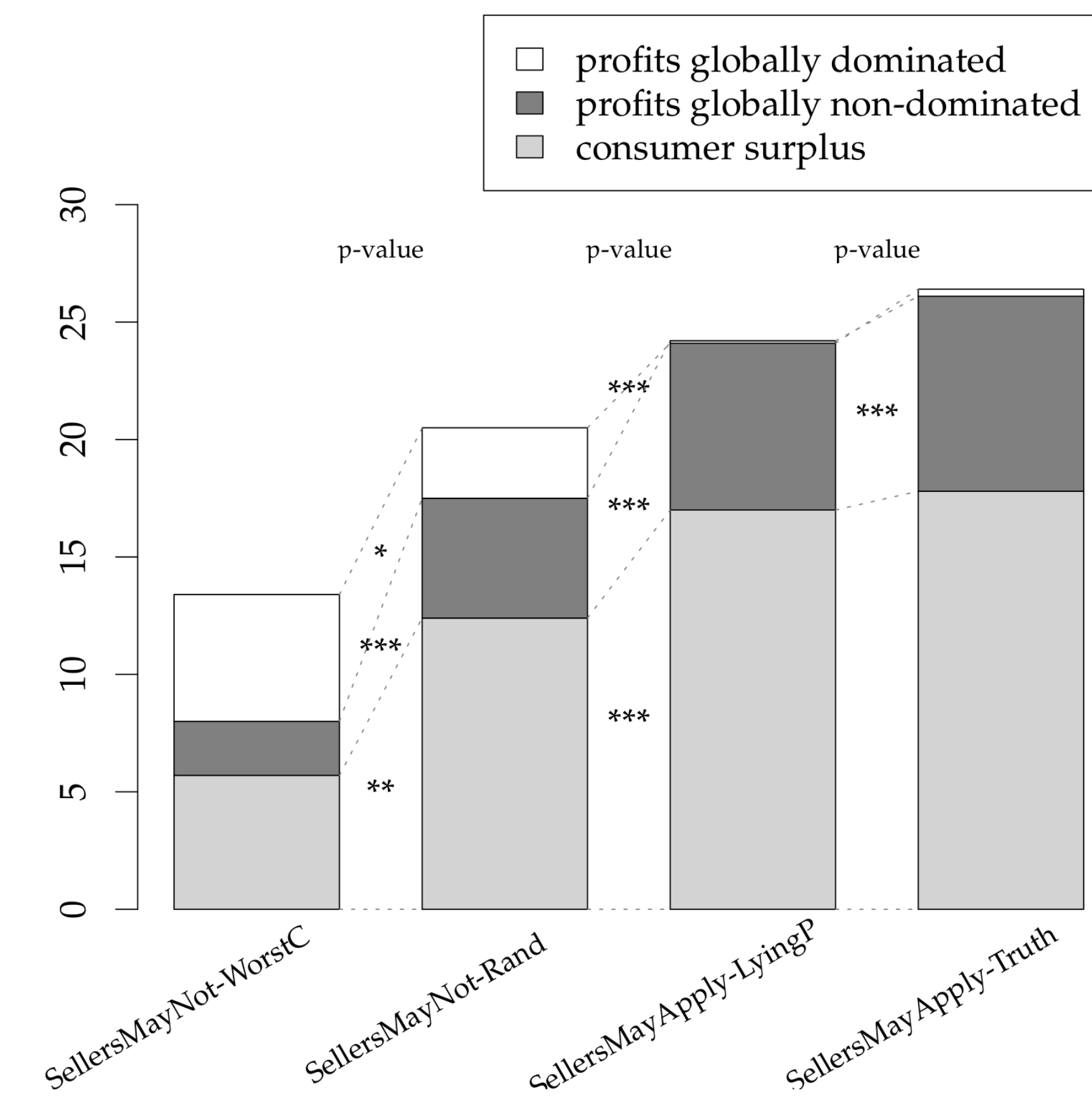


Figure 4: Experimental results



Note: For all treatment comparisons, we report the results of two-sided Mann-Whitney-U tests, conservatively counting one experimental session as one independent observation. We denote p-values as follows: *** < 0.01, ** < 0.05, and * < 0.1.

3 Outlook

- Our results apply to the short term, i.e., when qualities and prices have already been set.
- In a follow-up project, we extend the time frame to the long term, i.e., sellers can determine qualities and prices before product models are tested.
- Under our mechanism, do sellers supply different product models such that buyers are better off also in the long term?

Reference Vollstaedt, U., Imcke, P., Brendel, F., and Ehses-Friedrich, Chr. (2020). Increasing consumer surplus through a novel product testing mechanism. *Ruhr Economic Papers* 887, 1–85.

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