

Study into the sales of Add-on General Insurance Products: Experimental consumer research

A report for the Financial Conduct Authority

Prepared by



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Executive summary

Background

In 2012 the Financial Conduct Authority launched its Market Study into general insurance (GI) products sold as add-ons. These products are sold alongside primary products such as holidays, computers and motor vehicles. Previous work by the FCA identified that GI add-ons generally led to poor outcomes for consumers.¹ Similarly, the Competition Commission has banned point-of-sale of payment protection insurance (PPI) alongside other financial products such as unsecured loans, credit cards and mortgages.² The Competition Commission found that selling PPIs at the same time as other financial products had adverse effects on competition.³

A growing body of economic research suggests that the way in which information is presented to consumers can have profound effects on the way in which consumers will behave. Marketing techniques are often targeted to exploit the way in which consumers are affected by such framing exercises and this can result in substantial consumer detriment. Previous research by the Office of Fair Trading found that drip pricing, where the parts of the price are revealed during the purchasing process, can lead to significant problems for consumers.⁴

This study examines to what extent the way in which add-on insurance is presented to consumers can affect important market processes and outcomes, such as the extent of shopping around for insurance, take-up of insurance, price paid for insurance, the likelihood of consumer errors from choosing strictly worse bundles (primary products and insurance) among the available alternatives. The experiment provides evidence as part of the wider FCA study on the effect of add-on insurance products on market outcomes for consumers.

With the help of an online experiment, this study empirically tests the effects of:

- combining the add-on insurance offer with an associated primary product up-front at the point of sale (POS);
- delaying add-on insurance offers to the POS instead of declaring the offer up-front;
- introducing the option to search for alternative standalone insurance offers at the point of sale;
- the ease with these alternative insurance offers can be accessed; and,

¹ <http://www.fsa.gov.uk/static/pubs/other/rcro12.pdf>

² http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/press_rel/2011/march/pdf/13_11_ppi_cc_publishes_final_order.pdf

³ http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/inquiry/ref2010/ppi_remittal/pdf/report

⁴ London Economics, Partitioned Pricing Research (2013) and The Impact of Price Frames on Consumer Decision Making (2010).

- framing the insurance price in monthly or annual terms.

The experiment

The experiment was conducted online in September 2013 with 1,514 UK residents. The experiment was set up as a simplified online experience of shopping around for and ‘purchasing’ either primary products or insurance policies or both, depending on the experimental treatment they were assigned to.

The primary products were a home boiler, a tablet computer, a laptop computer, a luxury holiday for two and 12 days car hire in Spain. These products varied in a number of dimensions such as price of the primary product, the likelihood of an adverse event happening and cost of the adverse event.

After respondents selected a primary product and/or an insurance product there was a possibility they might encounter an ‘adverse event’. Whether the adverse event occurred was randomly determined, based on the probability of said event occurring.

Respondents were informed of the probability of this event occurring, as well as the amount of money they would lose in this case, before they were asked to purchase anything.

If the respondent decided to purchase insurance the adverse event did not affect the payments the respondent received. The respondent ‘traded in’ the primary product against a predetermined value, meaning there were incentives for the respondent to select the cheapest primary product.

However, if the respondent had decided not to purchase insurance, the cost of the adverse event was deducted from the respondent’s payment when trading in the primary product.

Incentives to purchase insurance in the experiment were therefore aligned with the incentives of purchasing insurance in the real world: by paying a smaller fee up-front, the respondent could avoid a higher loss which occurs with a given probability.

Respondents were asked to repeat this process five times, each time purchasing a different primary product. Between these five rounds respondents were not told whether or not the adverse event occurred. Each round was individually incentivised and payments were made after completion of the experiment.

Each respondent was randomly allocated to one of the following treatments:

- **‘Insurance only’**: In this treatment respondents searched for and potentially bought standalone insurance for a product they already owned.
- **‘Up-front add-on’**: In this treatment respondents searched for and bought a primary product (e.g. a home boiler or a tablet computer) and they also had the option to

purchase add-on insurance for the product. Each primary product was associated with an add-on insurance offer and this add-on insurance offer was displayed next to the offer of the primary product.

- **'Add-on at the POS'**: This treatment was identical to the 'Up-front add-on' treatment with the difference that the add-on insurance offer (i.e. the existence of the offer and price) was only revealed once the respondent had clicked on the 'Buy' button for the primary product. Respondents could return and view insurance offers for primary products already searched for at no cost.
- **'Add-on at the POS + easy alternatives'**: This treatment was identical to the 'Add-on at the POS' treatment with the exception that respondents could also search for alternative standalone insurance. The standalone insurance offers were displayed next to the primary and POS add-on such that the consumer could easily compare the POS add-on and the alternative stand-alone insurance offers.
- **'Add-on at the POS + hard alternatives'**: This treatment was identical to the 'Add-on at the POS + easy alternatives' treatment with the exception that when searching for an alternative standalone insurance, the respondent could no longer see the offers for the primary product with the add-on insurance. This set-up meant that it was more difficult for consumers to compare the POS add-on and the alternative standalone offers. However, respondents only needed to make one click to switch between the add-on and the standalone – similar to the amount of effort required to switch between tabs in a web browser.

There were eleven different primary product providers. In treatments where there were additional standalone insurance offers, there were also eleven different standalone insurance providers. Within each primary product and associated insurance, there was no difference in the quality or risk between different providers. The only variation between providers was price. Therefore, respondents faced a simple task of minimising the cost of the product bundle (primary and insurance) they wanted to purchase.

Throughout all treatments, prices for add-on insurance and for alternative insurance were drawn from the same distribution, meaning that neither insurance product was inherently cheaper or more expensive than the other.

In addition to these experimental treatments, respondents were also allocated to different frames:

- **'Yearly price frame'**: In this frame respondents saw the offer for insurance priced as a lump sum. Mostly this was yearly, but in the case of a 12 day car hire in Spain, the price was for the entire duration of the stay.
- **'Monthly price frame'**: In this frame respondents saw the offer displayed in its 'monthly equivalent' price. For the car rental it was the daily equivalent price. However, as soon as the respondent selected an insurance offer and placed it in their shopping basket, the final

lump sum price was provided and the respondent could still easily remove the insurance policy from their cart at this point in time.

- **'Unlabelled frame'**: In this frame respondents did not search for and purchase home boilers or 12 day car hires. Instead they searched and shopped for abstract products, such as 'Product 1'. This frame was introduced to test if respondents' choices in the experiment were sensitive to the types of products they were asked to purchase. For example, it could be the case that respondents had some preconceived ideas that some products required insurance and others did not. They may also have had emotional 'feelings' in regard to the products that could have influenced their behaviour.

The experiment results

The main results of the experiment will be outlined and explained here with as little technical language as possible. Detailed statistical analyses are left for the main body of the report, but it should be noted that all results which are presented in the executive summary are statistically significant and robust to controlling for socio-demographic information.

Search for primary product

The amount of search carried out by respondents for the primary product was similar across each of the treatments in which search was possible. The average number of searches across the treatments ranged from 4.9 to 5.8 per respondent.

Search for insurance

The amount of search respondents undertook to find an insurance product was similar between the two tasks where they searched for the insurance product only and the 'Up-front add-on' situation. However, in situations where respondents needed to search for both the primary and insurance products, search was heavily impacted by the way in which the insurance offer was presented.

The effect of delaying the add-on offer to the POS

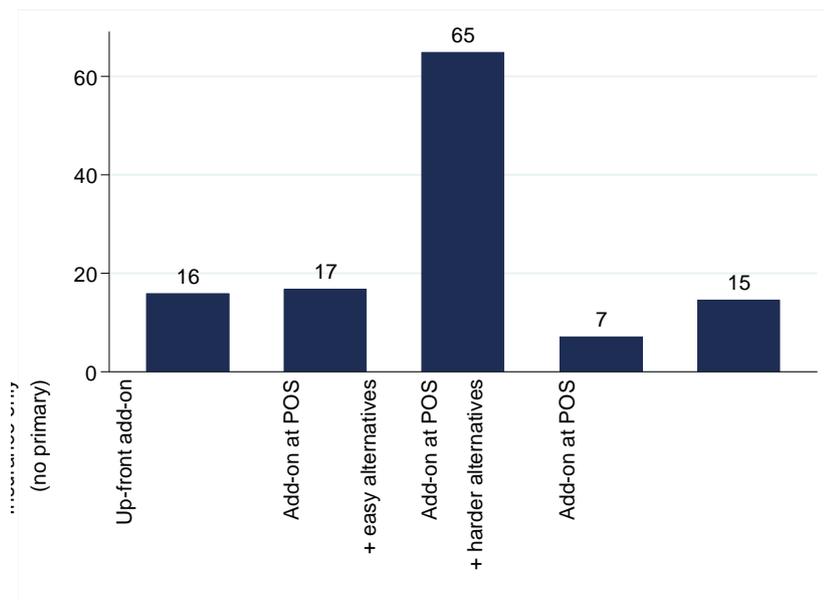
By comparing the search behaviour in the 'Up-front add-on' treatment and the 'Add-on at the POS' treatment, we can determine the effect of delaying the insurance offer to the point of sale as this element was the only difference between the two treatments.

This comparison not only revealed that **when the insurance offer was delayed respondents chose to view significantly fewer offers** (almost three fewer offers viewed) but also that when the insurance offer was only presented at the POS **over 70% of respondents only chose to view the one insurance offer** associated with the primary product they purchased. This compares to fewer than 20% who did so when the insurance offer was shown up-front.

A direct consequence of this was that when the add-on offer was only revealed at the POS, 65% of all participants bought the first offer they viewed.⁵ This contrasts starkly with only 17% of respondents who did so when the insurance offers were presented side by side with the primary product as can be seen in Figure 1 below.

Overall, we therefore find overwhelming evidence that delaying the add-on insurance offer results in fewer insurance offers viewed and a much higher likelihood of respondents purchasing the first offer.

Figure 1: Proportion of participants that bought insurance who also bought the first insurance offer viewed without further search.



The effect of allowing respondents to search for alternative insurance offers at the point of sale

The effect of allowing respondents to search for alternative insurance offers can be seen by comparing the results in the 'Add-on at the POS' treatment to those in the 'Add-on at the POS + easy alternatives' treatment.

This comparison reveals that respondents who had access to alternative insurance offers viewed on average 3.24 more offers than those who did not. **Allowing respondents to search for**

⁵ This does not include respondents who went back to the first insurance offer viewed after having viewed other insurance offers. It only refers to respondents who bought the first offer they viewed and who only viewed one insurance offer.

alternative insurance offers resulted in a 145% increase in the number of insurance offers viewed.

By comparing the third and fourth bar in Figure 1 above, respondents were also significantly less likely to simply purchase the first insurance offer they came across when the option to search for standalone alternatives was available alongside the add-on insurance.

Providing consumers with alternative insurance offers therefore can have large and positive effects on encouraging shopping around.

The effect of making the alternative insurance offers easily accessible

The final two treatments ‘Add-on at the POS + easy alternatives’ and ‘Add-on at the POS + harder alternatives’ test to what extent the ease with which alternative insurance offers could be accessed is important.

Making it ever so slightly **more difficult to search for alternative insurance—similar to requiring respondents to switch to another tab in a web browser—led respondents to view roughly 10% fewer offers** (5.00 as opposed to 5.48) and made them significantly more likely to purchase the first offer they came across.

This finding demonstrates that despite the fact that alternative insurance offers are very beneficial to consumers, only small differences in how easy it is to access this alternative insurance can have large effects.

Take-up of insurance

In addition to affecting search behaviour, there is also evidence that the consumer’s decision of whether or not to purchase insurance can be affected by the way in which the insurance offers are presented.⁶

The three main results that emerge with respect to take-up of insurance are:

- Respondents were **more likely to purchase insurance when they had access to alternative insurance offers** in addition to the add-on insurance offers.⁷

⁶ The take-up rates in the experiment do not necessarily correspond to take-up rates in the real world. This is due to the fact that the experiment setting is a stark simplification of the real world and in such simplified settings subjects are likely to completely ‘explore’ the environment, thereby showing a greater demand for insurance than we would expect to see in the real world. However, as the focus of the experiment is the difference in behaviour *between* treatments, this is of no consequence to the external validity of the experiment (see more on this in Section 5).

⁷ In the treatments where respondents could search for alternative insurance offers, they had a greater chance of finding a better priced offer, because there were more offers available. However, even when we control for the number of offers seen, willingness to buy insurance increased when alternatives were available.

- Respondents who had access to both add-on and alternative standalone insurance tended to **prefer standalone insurance to add-on insurance**, but when searching for standalone insurance was harder, take-up of add-on insurance increased at the expense of standalone insurance.
- There was no difference in insurance take-up between the ‘Up-front add-on’ and the ‘Add-on at the POS’ treatments.

It should be noted in regard to the first result that respondents who had access to alternative insurance in the experiment necessarily could view *more* insurance offers. Being able to view more insurance offers meant they had a higher chance to find a cheaper offer which may have increased take-up. However, the findings above are robust to controlling for the number of insurance offers seen; meaning that respondents who viewed the same number of insurance offers were (still) more likely to purchase insurance if they had access to standalone insurance alternatives.

Average price paid for insurance

The average price consumers pay is another very important outcome to examine and there is strong evidence in the experiment that the way in which insurance is presented has a material effect on how much respondents paid for insurance.

The effect of offering insurance up-front

When respondents were required to shop around for both the primary and the add-on insurance offer in the ‘Up-front add-on’ treatment average price paid for insurance increased relative to the standalone-only environment. However, this was not solely due to increasing the computational difficulty of the task. In the ‘Up-front add-on’ treatment it was perfectly rational for respondents to pay a higher price for the add-on insurance in order to pay a lower price for the primary product. Therefore these two treatments are not strictly comparable in terms of average price.

The effect of delaying the add-on offer to the point of sale

By directly comparing the average price paid by consumers who viewed the insurance offer upfront (in the treatment ‘Up-front add-on’), and those who only found out about the insurance offer just before check-out (‘Add-on at the POS’ treatment), the impact of delaying the insurance offer on the price paid can be identified.

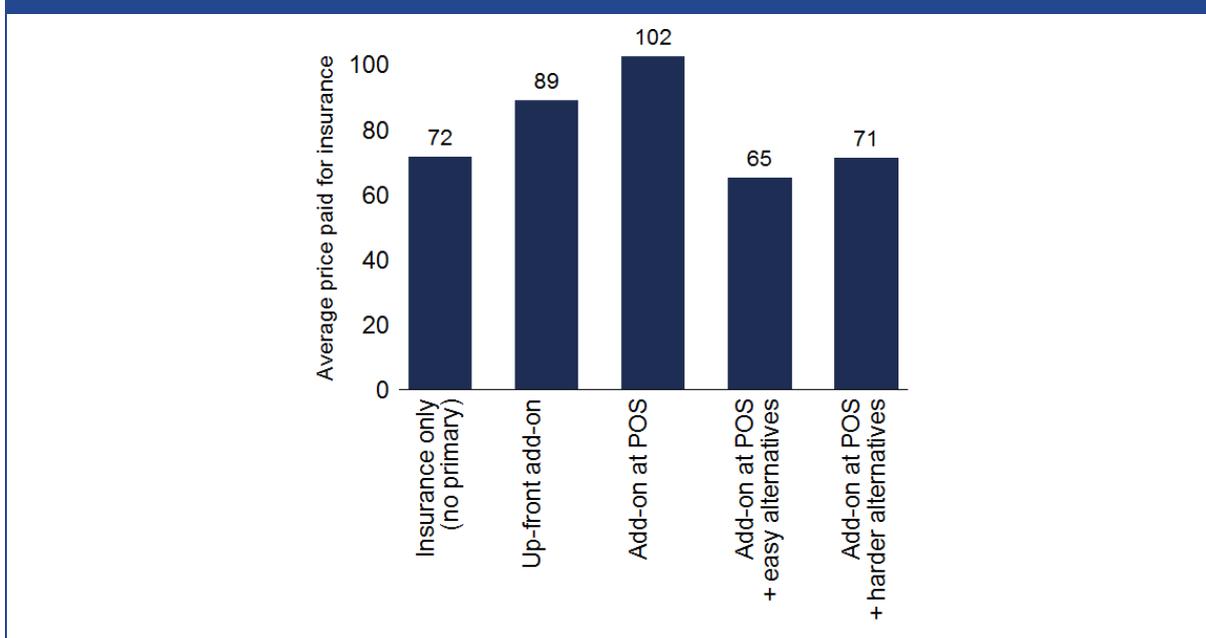
As can be seen in Figure 2 below, delaying the insurance add-on offer to the POS **resulted in a 15% increase in the price consumers paid** for their add-on insurance from the format where insurance was presented up-front.

The effect of allowing respondents to search for alternative insurance offers

Also clearly visible in Figure 2 is that once respondents were able to search for alternative insurance offers, **the average price paid for insurance was reduced by over a third**. While respondents did have the opportunity to view more offers, and therefore had a higher chance of finding a cheaper offer, the difference between these two treatments is robust also for controlling the number of insurance offers seen.

However, it is important to caveat this result that respondents who did not have access to standalone insurance may have optimally decided to purchase a more expensive add-on if the price of the primary product was sufficiently cheaper to more than make up for the more expensive insurance offer. In fact, comparing the total amount spent between the two treatments, we observe no statistically significant difference.

Figure 2: The average price paid for insurance by treatment



The effect of making the insurance offer easily accessible

Comparing the final two treatments provides insight to what extent the ease with which the alternative offers can be accessed affects the price paid for insurance.

While the average price paid is only moderately increased by 10%, this disguises a significant amount of variation between the price respondents paid for standalone and add-on insurance in the two treatments.

The price for the alternative standalone insurance was almost identical with an average of 62 and 63 units of the experimental currency paid per product. However, the average price for add-on insurance increased more dramatically between the two treatments, rising from 74 in the easy alternatives treatment to 86 in the harder alternatives treatment.

This result suggests that when the search for alternative standalone insurance is more difficult, the price of the 'dripped' add-on insurance needs to be higher to induce respondents to search for standalone alternatives. The need to simply click once to reveal a standalone alternative is unlikely to be large enough to explain this outcome. However, once respondents do search for alternatives they do so with equal effectiveness in both treatments.

Errors and losses

Given the nature of the study, it is not possible to directly compare welfare across different treatments because what is optimal behaviour is not possible for the researcher to observe. More risk-averse individuals may make a mistake when they do not purchase insurance and risk-neutral participants may make a mistake if they pay too much for insurance. Similarly respondents with a high opportunity cost of time may make a mistake when they search too much and others may make a mistake when searching too little.

As a result, we focus on an error measure which only requires the choices made by each participant to be consistent between treatments. In other words, the objective for participants in each treatment was to minimise costs and maximise earnings. The error measure is defined as the proportion of respondents that did not choose the cheapest primary product and/or insurance offer that was available to the respondent given the amount of search he or she did. That is, the respondent made a mistake and did not choose the best deal available. It is important to note that this error measure is based on all insurance offers available to the respondent, including those add-on insurance offers that respondents did not choose to view when they had viewed the respective primary good offer.⁸

For example, consider a respondent who first viewed a tablet for £455, then revealed a second tablet for £450. After having revealed the second tablet the respondent decided to reveal the add-on insurance offer, associated with the second tablet, for £90 and purchased this combination (tablet plus insurance). If the add-on insurance offer of the first tablet had been less than £85, this respondent would have made a mistake regardless of whether she revealed the add-on offer associated with the first tablet (since $£455 + £85 = £450 + £90$).

⁸ As previously stated, search and viewing insurance offers was easy in this experiment, with only one click of the mouse required to reveal an add-on offer associated with a primary product.

In addition to this error measure we also consider a loss measure. This measure is the actual amount lost in earnings in the experiment if the respondent made an error. If the respondent made no error then the loss was zero.

The effect of up-front add-on offers

The **proportion of respondents that made a mistake increased by 13 percentage points when the insurance was offered up-front** compared to the 'Insurance only' treatment.⁹ This illustrates that even a small increase in the computational requirements led to significantly more difficulty for respondents in identifying the best deal.

The effect of delaying the add-on offer to the point of sale on errors

We find that **respondents who viewed the add-on insurance offer only at the point of sale had a seven percentage point higher error rate** than respondents who saw the add-on offer up-front. This represents a 41% increase in the error rate. As can be seen in Figure 3 the error rate was 17% when the add-on insurance offer was shown up-front and 24% when it was delayed to the POS.

This result is largely due to the fact that respondents in the add-on treatment chose not to reveal the majority of add-on insurance offers which were available to them. After having incurred the search cost for the primary product, the associated add-on insurance offer could be immediately and costlessly revealed; yet the majority of respondents chose not to do so and as a result, they made errors.

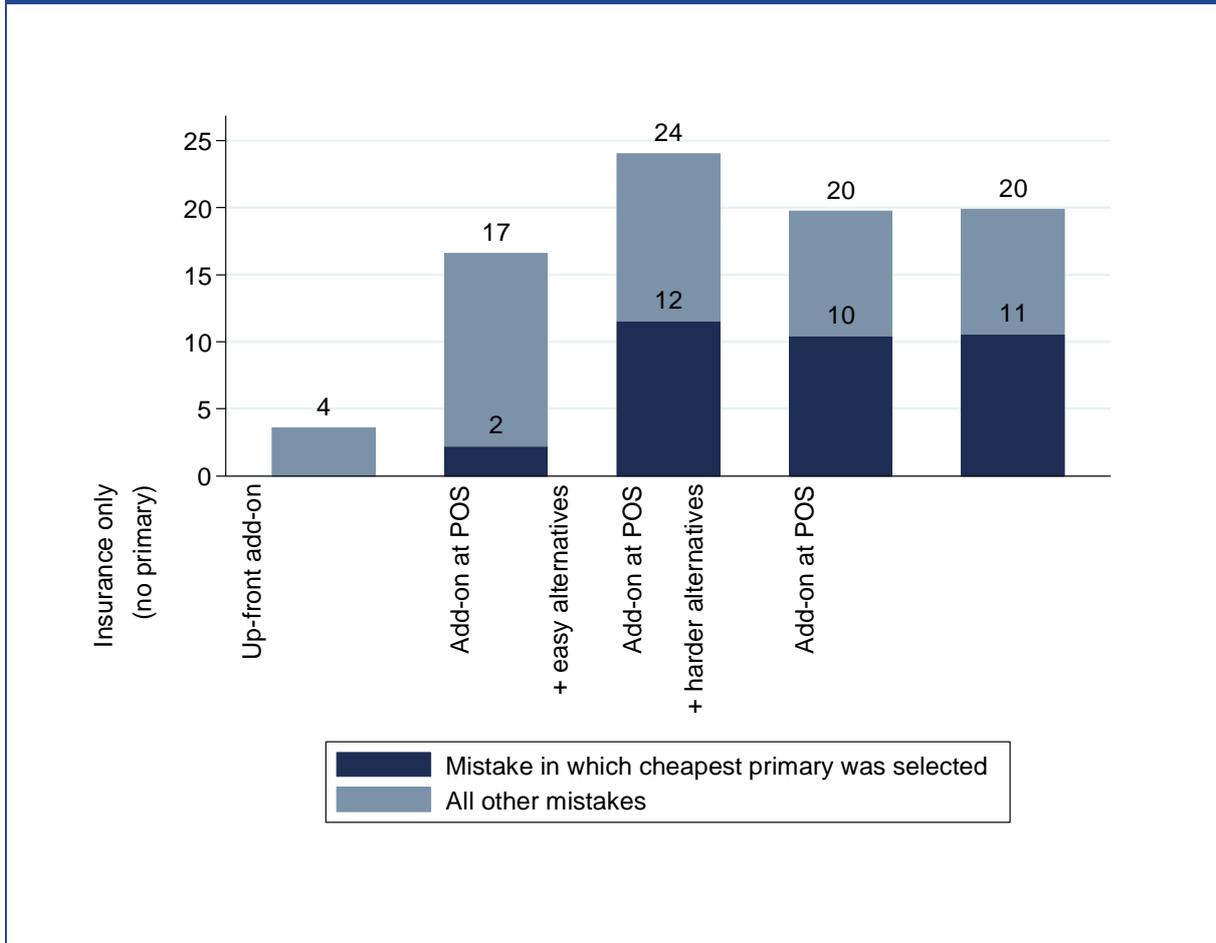
Also shown in Figure 3 is the fraction of respondents who made an error and who purchased the cheapest primary product. The tendency to do so is significantly higher in the 'Add-on at the POS' treatment where half of all errors were associated with the respondent purchasing the cheapest primary product instead of the cheapest primary and insurance combination. Respondents in the 'Add-on at the POS' treatment therefore appear to have focused their search efforts mostly on the primary product and devoted less of their attention to the add-on insurance product.

The effect of allowing respondents to search for alternative insurance offers on errors

The **error rate of respondents was reduced by 20% once they were allowed to search for alternative insurance offers**. This can be seen by noting that the error rate decreased from 24% in the 'Add-on at the POS' treatment to 20% in the 'Add-on at the POS + easy alternatives' treatment.

⁹ 4% of respondents made a mistake in the insurance only treatment compared to 17% in the Up-front Add-on.

Figure 3: Proportion of respondents who made a mistake, by treatment



Respondent losses

A similar pattern is seen in terms of respondent losses. Providing the insurance offer up-front at the POS increased losses compared to the treatment with standalone search only, this again illustrates that a small increase in computational requirements led to more difficulty for respondents. Further, delaying the add-on insurance offer to the point of sale led to 62% higher losses compared to providing the add-on insurance offer up-front.¹⁰

When respondents could search for alternative standalone insurance offers, losses were significantly reduced. Average losses were halved when easily accessible alternative standalone insurance offers were made available.

¹⁰ Average loss in the add-on insurance up-front treatment was 11.3 experimental currency units. In the add-on at the point of sale treatment average loss was 18.2 experimental currency units.

Outcomes for sellers

The fact that take-up of insurance and the average price paid for insurance was affected by the various treatments suggests that the profit of insurance providers may have also been affected.

Profit is an important outcome to examine because in real markets sellers optimise by choosing the framing which maximises profits.¹¹ Understanding which frames led to the highest profits also suggests which frames are most likely to be commonly used in practice.

Profits as measured in this experiment **reflect static effects** of the treatments on individual providers. They do not reflect market equilibrium outcomes where all firms behave in this manner.¹²

The effect of delaying the add-on offer to the POS

Insurance providers made significantly more profits in the ‘Add-on at the POS’ treatment than in the ‘Up-front add-on’. As the only difference between these two treatments was the fact that the add-on insurance offer was delayed, we can deduce that **delaying the add-on insurance offer to the point-of-sale led to a 20% increase in profits.**

The effect of allowing respondents to search for alternative insurance offers

Comparing profits in the ‘Add-on at the POS’ to profits made in the ‘Add-on at the POS + easy alternatives’ treatment reveals that including an option to search for alternative insurance offers had a dramatic effect on profits:

Including the option to search for alternative insurance offers halved profits made through the sale of insurance products.

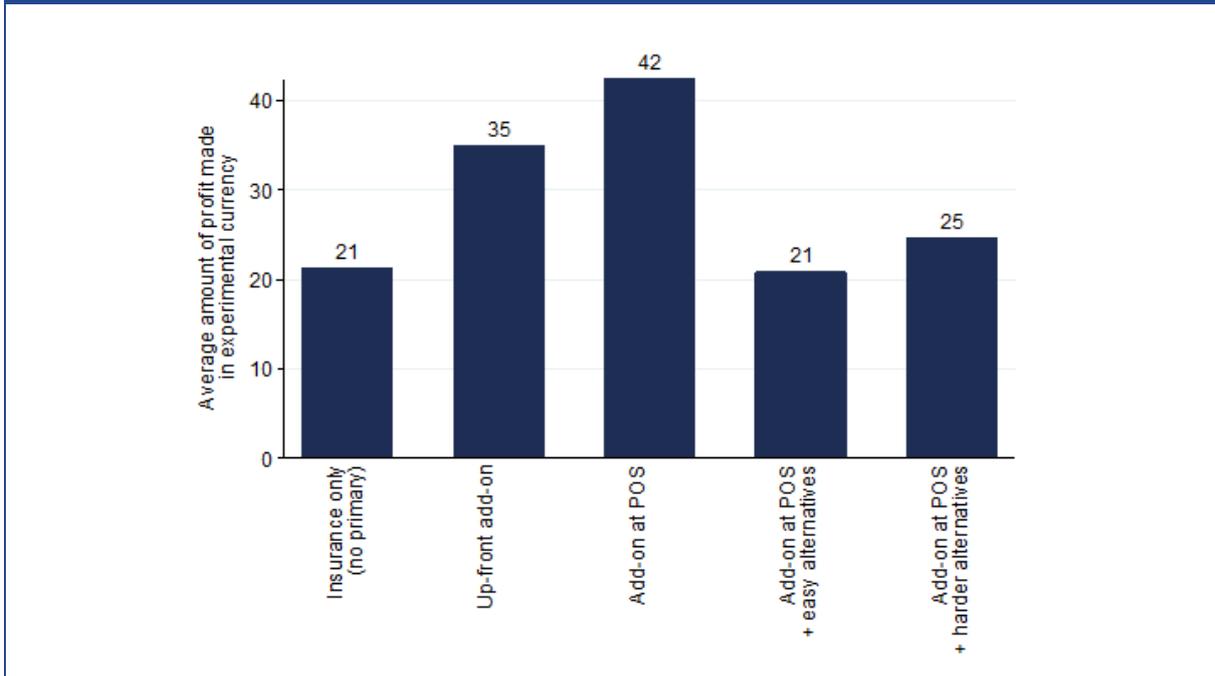
The effect of making the insurance offer easily accessible

Similarly, making it easier or more difficult to search for alternative offers had a significant impact on the amount of profits made by insurance providers. **Making the alternative insurance offers only slightly less accessible meant that insurance providers increased their profits by 20%.**

¹¹ Changing presentation of insurance offers is costless to sellers in this experiment.

¹² An increase in profits by sellers in this experiment reflects a re-distribution from buyers to sellers.

Figure 4: Average amount of profit made by insurance companies, by treatment



Monthly versus yearly framing of prices

As discussed previously, the experiment also tested whether or not the framing of the insurance price itself affected consumer behaviour. Hence some respondents saw the prices for insurance products (both add-on and standalone) framed as a lump sum cost, generally covering the cost of insurance for a year, or they saw the cost of insurance broken down into smaller components, usually monthly.

In the monthly price framing, the total (generally yearly) cost was displayed as soon as the respondent placed the insurance product in their shopping basket. The respondent could still easily remove the insurance policy from their basket at this point in the experiment. This intervention therefore was only a minor modification; nonetheless, we find the following effects due to monthly as opposed to yearly labelling of offers:

Respondents **chose to view significantly fewer insurance offers under the monthly framing**. The average number of insurance offers viewed under the yearly lump sum framing was 4.68, but in the monthly framing this number was reduced to 3.94 which represents a decrease of 16% in the number of offers viewed. The proportion of respondents that bought the first insurance offer they

viewed was 19% under yearly framing and 26% for monthly¹³, indicating that the smaller value reported for monthly insurance encouraged more people to search less.

Similarly, **the average price at which insurance was bought was higher under monthly framing.** Insurance policies priced as yearly were bought for 76 units on average while monthly priced policies were bought for 81 units on average.

Average loss to respondents was higher under the monthly framing than it was under the yearly framing. The average loss respondents made under the monthly framing was 12 units per product, while it was only 8 units in the yearly framing. This represents a 50% increase in the average loss made per product purchased, indicating that respondents were finding it more difficult to make the correct decisions. This can also be seen by the fact that **respondents who saw insurance prices quoted in monthly terms were more likely to be surprised and change their mind** about purchasing a policy when they saw the price converted to yearly total.¹⁴

The effect of the primary product

As previously outlined, respondents in the experiment were asked to purchase a number of different primary products. These products were:

- A home boiler
- A tablet computer
- A laptop computer
- A luxury holiday for two
- 12 day car hire in Spain

The products differed not only in their description, but also in their parameters. For some products the price of the primary was very high relative to the value of the expected loss and for others this ratio was much smaller. For some products the cost in case of the adverse event was very high and for other this cost was lower. Similarly, the likelihood of the adverse event occurring varied across products.

Differences in respondent behaviour for different products can therefore be due to two separate effects:

- The parameters of each product (e.g. price of primary, price of insurance, etc.) may lead respondents to behave differently.
- Personal biases participants may have towards different products and their perception that some products require insurance more than others.

¹³ This difference is statistically significant at 1%.

¹⁴ Respondents were also clearly told in the instructions that the insurance was framed as monthly cost.

In order to disentangle these two effects the experiment also included *unlabelled* versions of the products (e.g. ‘product 1’). That is, some respondents did not see the labels ‘home boiler’, ‘tablet computer’ etc when they played the game. The parameters however were unchanged.

The results of the experiment show that labelling products generally increased the take-up of insurance. This is likely due to the fact that respondents found it easier to relate to purchasing a ‘tablet computer’ than simply ‘product 1’. Similarly, respondents were also more likely to purchase the first offer seen when the product was unlabelled.

The analysis also revealed that **take-up of insurance was higher for products for which the cost of the primary product was much larger than the cost of the insurance.**¹⁵ This finding suggests that respondents anchored on the high price of the primary product and then adding insurance for a significantly smaller sum was less painful. On the other hand, when the cost of the insurance relative to the primary product was larger, adding insurance appeared more painful.

Similarly, respondents **were also less likely to search and more likely to simply purchase the first insurance offer seen the higher the cost of the primary good relative to the cost of the insurance policy.** Once again, this suggests that respondents anchored on the expensive primary product and then did not put much search effort into the insurance product.

The effects of the treatments were the same across all primary products tested in the experiment.

The effects of socio-demographic characteristics

Overall, **older respondents performed slightly worse** in the experiment, experiencing higher losses, paying more on average for insurance and viewing slightly fewer offers.¹⁶

Respondents with **more education** were slightly (3%) more likely to make use of the option to search for alternative insurance when they had the option to do so.¹⁷

Men were 8% less likely to purchase insurance overall and they viewed fewer insurance offers. They were also 6% less likely to search for alternative insurance offers when they were given the chance to do so. However, there were no differences in the average price paid for insurance or the amount of loss made between men and women.

A measure of **cognitive ability** correlated strongly with paying less for insurance (nearly 5 units of experimental currency less) and with viewing more insurance offers. Similarly, respondents with high cognitive ability also had significantly smaller losses than those with lower cognitive ability.

¹⁵ This finding holds when loss is controlled for.

¹⁶ Older respondents are those who were above the average age for the sample. The average age was 52 years.

¹⁷ Education was measured as the age at which the respondent left school. The average age for leaving school was 18 to 19 years within the sample. The later a respondent left school the more likely they were to search for alternative standalone insurance.

Respondents who could **correctly answer a financial literacy** question also paid far less for insurance (nearly 8 units of the experimental currency less). They were likely to view more offers, although at the same time were less likely to purchase insurance at all (although only 3% less likely).

The **number of insurance products currently owned** was also a predictor of take-up of insurance in the experiment. Similarly, respondents who owned more insurance products tended to pay less for insurance in the experiment and tended to view more insurance offers. It is possible that this is due to the greater amount of experience these respondents had with the insurance market; however it could also be a consequence of the fact that these respondents simply like insurance more, e.g. because they are more risk averse.

As respondents repeated the experiment tasks, average price paid for insurance decreased, losses were reduced and the average number of insurance offered viewed increased. The effect of repeating the experiment did not differ between treatments in any meaningful way. The only difference which could be observed was that the number of insurance offers seen increased more steeply over time in the two treatments which offered the respondents access to standalone insurance offers compared to the 'Up-front add-on' treatment. However, when compared to the increase in the 'Add-on at the POS' treatment or the 'Insurance only' treatment, no significant difference was observed. For all other outcome variables the effect of learning was the same across all treatments.

External validity of the results

External validity refers to how confident we can be that the difficulties encountered by respondents in the experiment will also be experienced by consumers in real insurance markets. We designed the experiment to maximise the external validity of the results. The environment captured the key features of online search and purchase and used realistically framed products. While the key features were captured in the experiment, it was a simplification of the more complex real world environment.

In all experimental design, there is a trade-off between more complex environments that capture multiple features of markets, and simplification and stylisation that focuses on the key characteristics important for consumer choice. Complexity can lead to more decision errors and noise in the data will invariably increase. This makes it more difficult to detect differences between treatments for given sample sizes. Simplification creates a situation where the learning from experiments can be asymmetric. If respondents in a simplified environment have no difficulties making decisions in the experiment, then it is hard to say that consumers in more complicated real world markets will also do well. However, if we observe difficulties in simple environments then we can be confident that problems will also arise in more complicated environments.

The fact that the experiment environment was simplified meant that purchasing add-on insurance in the experiment was a significantly easier task than purchasing add-on insurance in the real world. For example, the quality and risk of different insurance products was the same between providers for a given product. Therefore, respondents only had to minimise the cost of the primary product and the insurance offer. In addition, the comparison of alternative standalone insurance offers with the add-on at point of sale insurance was much easier (even in the hardest set-up) than in the real markets. We can therefore be confident that the problems respondents experienced between treatments in this experiment will also be experienced by consumers in real markets.

In our experiment, prices for primary and insurance products were externally fixed. In real markets, firms choose prices. Given our findings, it appears clear that certain designs (such as delaying the add-on offer to the POS) allow firms to charge higher prices. Consumers would then suffer in two ways: first, from their direct negative consequences we measure in this experiment *and* second, from the higher prices. Similarly, the price distribution for stand-alone and add-on insurance are the same in the experiment. This is unlikely to be the case in the real market where sellers may tailor prices between stand-alone and add-ons. As such, the value of search for additional insurance offers would be greater in the field than in the experiment in cases where the price distribution for standalone offers is lower than add-ons.

We have good reason to believe in the general external validity of our results – that these practices do affect consumer behaviour and that what we identify in the online experiment is probably rather the tip of the iceberg as there are many aspects of real-life markets that will accentuate the problems we document here. Although inevitably there are also likely to be some factors in real life which will mitigate concerns about practices, such as the desire for firms to build reputations, and consumers to learn about honest firms.

Conclusions

This study has demonstrated that the way in which add-on insurance is presented to consumers can have very large effects on important outcomes such as:

- How many people purchase insurance (take-up);
- How much they are prepared to shop around for it;
- How much they pay for it;
- The type of insurance they purchase (add-on versus standalone);
- The likelihood of consumers making mistakes in not purchasing the cheapest offer available and how much they lose as a result;
- How much profit insurance providers may make.

In particular, the experiment showed that not revealing the add-on insurance offers until the POS, as opposed to displaying them up-front, can be very detrimental to consumers. Consumers end up choosing to view fewer insurance offers and as a result they make more mistakes and pay higher average prices for their insurance products. Sellers of insurance products on the other hand have the highest profits when the add-on offer is dripped at the final moment.

However, the experiment also identified that providing consumers with the opportunity to shop around for alternative standalone insurance offers at the POS can go a long way towards overcoming these detrimental effects.

When consumers were offered the chance to search for alternative standalone insurance offers to replace the add-on insurance offer included with the primary product, the average price paid for insurance fell significantly and even to levels below what respondents paid when the add-on offer was displayed alongside the primary product offer. At the same time, the experiment also made it clear that even small barriers to accessing the alternative options reduced the benefits significantly.

1 Introduction

Evidence is quickly amassing that the way in which information is presented affects consumer behaviour. While classical economics assumes that rational consumers are able to identify the offer which best suits their needs regardless of the way in which the information is presented, behavioural economics has demonstrated that framing can be extremely important in shaping one's decisions.

The present study adds to this literature by demonstrating that the way in which add-on insurance offers are presented can have substantial effects on a number of important factors: presentation affects take-up of insurance, it affects the way consumers search for and compare insurance offers, it affects how much they pay for it and it influences how many mistakes they make. As a result, presentation of add-on insurance can directly affect the profits of insurance providers and the welfare of consumers.

In order to empirically test the effects of framing on consumer behaviour in the context of add-on insurance, an online experiment was conducted with 1,514 UK residents in which respondents were asked to shop for 'primary products' for which they also had the option to purchase insurance for these products. The primary products were a home boiler, a tablet computer, a laptop computer, a luxury holiday for two and 12 day car hire in Spain.

Respondents had the option to purchase either add-on or standalone insurance or they had the option to choose between the two. Add-on insurance was defined as insurance which is attached to a certain primary product, i.e. add-on insurance cannot be bought without purchasing the corresponding primary product. Standalone (or alternative) insurance on the other hand could be bought independently of any primary product, but specifically insured the respective primary product.

There were five different experimental treatments in each of which the insurance offers were presented slightly differently. Each respondent was allocated to one of these treatment groups at random:

- **'Insurance only'**: In this treatment respondents searched for and had the opportunity to buy standalone insurance for a product they already owned.
- **'Up-front add-on'**: In this treatment respondents searched for and bought a primary product (e.g. a home boiler or a tablet computer) and they also had the option to purchase add-on insurance with this product. Each primary product was associated with an add-on insurance offer and this add-on insurance offer was displayed next to the offer of the primary product.
- **'Add-on at the Point of Sale (POS)'**: This treatment was identical to the 'Up-front add-on' treatment with the difference that the add-on insurance offer (i.e. the existence of the offer and price) was only revealed once the respondent had clicked on the 'Buy' button for

the primary product. In other words, the add-on insurance was dripped to the consumer. However, even at this stage, respondents could costlessly go back to other primary products they had already viewed to reveal add-on prices that corresponded to them.

- **‘Add-on at the POS + easy alternatives’**: This treatment was identical to the ‘Add-on at the POS’ treatment with the exception that respondents could also search for alternative standalone insurance. The standalone insurance offers were displayed next to the primary and POS add-on such that the consumer could easily compare the POS add-on and the alternative stand-alone insurance offers.
- **‘Add-on at the POS + hard alternatives’**: This treatment was identical to the ‘Add-on at the POS + easy alternatives’ treatment with the exception that when searching for an alternative insurance, the respondent could no longer see the offers for the primary product with the add-on insurance. This set-up meant that it was more difficult for consumers to compare the POS add-on and the alternative stand-alone offers. However, respondents only needed to make one click to switch between the add-on and the standalone.

In addition to these experimental treatments, respondents were also allocated to different frames:

- **‘Yearly price frame’**: In this frame respondents saw the offer for insurance priced as an annual lump sum.¹⁸
- **‘Monthly price frame’**: In this frame respondents saw the offer displayed in its ‘monthly equivalent’ price,¹⁹ although the experiment instructions made it clear they would be paying for one year in total. As soon as the respondent selected an insurance offer and placed it in their cart, the final annual lump sum price was calculated and the respondent could still easily remove the insurance policy from their cart at this point in time.
- **‘Unlabelled frame’**: In this frame respondents did not search for and purchase home boilers or 12 day car hires. Instead they searched and shopped for abstract products, such as ‘product 1’. This frame was introduced to test if respondents’ choices in the experiment were sensitive to the types of products they were asked to purchase. For example, it could be the case that respondents had some preconceived ideas that some products required insurance and others did not.

Section 2 outlines the economic experiment in further detail. Section 3 presents the key results of the main outcome variables of interest: how search for insurance was affected, how take-up of insurance was affected, how the price paid for insurance was affected, to what extent respondents made mistakes/errors in each of the treatments and to what extent insurance providers’ profits were affected. We also consider the effects of ‘yearly’ or ‘monthly’ framing of prices and to what extent behaviour was affected by the particular products selected for the experiment.

¹⁸ In the case of 12 day car hire in Spain the insurance was framed as the lump sum for the 12 days.

¹⁹ For the car rental it was the daily equivalent price.

2 The experiment

2.1 Experiment methodology recruitment

1,514 respondents throughout the UK were recruited to take part in the online experiment and in a short online survey.

The sample for the online survey was drawn at random from YouGov's 400,000 strong online panel of adults. Invitations to take part in the study were made via email. Each email contained two separate links: one to a short survey and one to the experiment itself. Respondents were told that they would only earn money for taking part in the study if both parts were completed.

Respondents were recruited to be representative of the UK population with regards to age, gender, social grade, education and geography.

However due to the fact that respondents had to complete two separate components, it was not possible to guarantee a representative sample and as a result some differences relative to the UK population materialised in our sample. In particular, the sample included more men than women (65% men compared to 35% women) and more participants from the higher socio-demographic groups than from the lower socio-demographic groups (75% to 25% in the data when it should be 55% to 45%).

As a result, great care was taken to control for all socio-demographic characteristics to ensure that all results reported are robust to the inclusion of all available socio-demographic control variables. Wherever results vary by socio-demographic characteristics this is made explicitly clear, and explained if and how this affects the interpretation of the results.

Table 1 below details the characteristics of those respondents who started the experiment, but who dropped out at various stages versus those respondents who completed the whole experiment. Older respondents were somewhat more likely to drop out of the experiment than younger respondents, as were poorer respondents although the difference in average income is small.

There appears to be no evidence that gender or social class correlate with the dropout rate.

Table 1: Socio-demographic characteristics of respondents who dropped out and those who completed the experiment

	Count	Average age	Percentage of male respondents	Average social class (1= upper or middle class, 2=working class)	Income (out of 15 categories)
Dropped out reading the instructions	116	60	54%	1.7	7.8
Dropped out during the quiz	60	57	71%	1.3	8.0
Dropped out during the experiment	76	61	66%	1.5	6.7
Completed the experiment	1,514	52	63%	1.3	8.5

It should be noted that despite the fact that women and lower socio-demographic groups were somewhat underrepresented in the sample, the sample is sufficiently large to allow us to make inferences and predictions for women and lower socio-demographic groups as well (564 women and 383 working class citizens are included in the sample).

2.2 Experiment environment

In the experiment respondents were asked to shop for a primary product and an insurance product. Each primary product had an associated risk of an adverse event occurring. For example, in the case of car hire, the adverse event was a collision and the chance of this occurring was framed as 5 out of 100 people experience this event. Whether the adverse event occurred was randomly determined based on the pre-set probability. Respondents were informed of this probability, as well as the amount of money they would lose if the event happened, before they were asked to purchase anything. By purchasing insurance the consumer was fully insured against the cost of the adverse event. Within product type there was no difference in the quality of insurance offers or primary product offers. The only difference between different providers was price. Therefore, respondents only had to minimise the cost of the primary and any insurance bought.

It was necessary to inform respondents in the experiment about the probability of the adverse event occurring to enable us to measure the effect of the treatments on respondents' decision-making about insurance, and their choice of the best insurance offer available to them. If we did not provide respondents with the probability of the adverse event, then this would be an unobservable pre-conceived belief that the respondents would have had in the experiment and we would not have been able to measure relative decision-making between the treatments.

The experiment was incentivised using real monetary incentives.²⁰ Respondents were told what the value of the product was to them, and that they could ‘trade-in’ the product at the end of the experiment for this value. This created the situation of real-life utility within the experiment environment. Respondents had the incentive to purchase the cheapest primary product because their earnings at the end of the experiment were trade-in value minus price paid for the product. Incentives to purchase insurance in the experiment were also aligned with the incentives of purchasing insurance in the real world: by paying a smaller fee up-front, the respondent could avoid a higher loss which occurred with a given probability.

Respondents were asked to repeat the purchasing process five times, each time purchasing a different primary product. Between these five rounds respondents were not told whether or not the adverse event occurred.

Search

Respondents were able to search for up to 11 offers of the primary product, each of which was accompanied by its own add-on insurance. For some treatments, the respondents were also able to search for up to 11 offers of alternative standalone insurance, which could be purchased independently of the primary product chosen. In the insurance only treatment, respondents could only search for standalone insurance, and in the ‘Add-on at the POS’ and ‘Up-front add-on’ treatments they could only search for add-on insurance as no standalone options were available.

Searching for more offers was associated with a time delay which was increasing in the number of searches the respondent undertook. For the first three offers (either primary or standalone insurance) which were revealed, the waiting time was 5 seconds, for the next three searches it was 10 seconds, followed by fifteen for the following three and finally thirty seconds for the final two offers. This increasing time delay was selected to capture the real-market features of it being relatively easier to find the first offers but as search increases it can be more difficult to find later offers as the pool of unseen offers becomes smaller.

However, once the search cost had been incurred for revealing a new offer, going back to previously revealed offers was instantaneous. Previously revealed offers did not remain on the screen, but could quickly be revealed by clicking on a link which said “Go to shop X”.

Experiment currency

Throughout the experiment, everything was conducted in terms of the experiment currency framed as pounds sterling. This framing was done so that the payments to participants could be set at a reasonable level, but that the prices of the primary products and insurance used in the experiment appeared accurate and realistic with a unit of experimental currency being equivalent to pounds sterling.

²⁰ These were YouGov points that can be transferred into high street shopping vouchers.

At the end of the experiment participants could exchange the experimental currency to pounds sterling at a known rate.²¹

The products

Each respondent was asked to shop for five primary products and insurance. The only exception was the insurance only treatment where respondents already 'owned' the primary product and therefore only shopped for insurance. The primary products were:

- A home boiler
- A tablet computer
- A laptop computer
- A luxury holiday for two
- 12 day car hire in Spain

The order in which respondents saw each of these products was randomised. The price for each of the products, the likelihood of an adverse event occurring to the product and the cost of the adverse event were calibrated based on market research and data provided by the FCA. The products were selected to represent different combinations of price and risk, and also potentially different levels of emotional appeal to the respondents.

Each of these products is discussed in detail below.

Home boiler

- Cost of primary product: started at £895
- Probability of adverse event occurring: '4 out of 100 buyers'
- Cost in case of adverse event: £370

The home boiler was selected as an example of a relatively expensive primary product with a reasonably low probability of breaking down, and in the case of the adverse event (repairs in case of breakdown) the cost was less than half of the cost of the primary product itself.

The cost of fair insurance²² in this case was equal to £14.80, which is calculated as the cost of the product multiplied by the probability of the adverse event occurring ($£370 * 0.04 = £14.80$). This was therefore a relatively small cost relative to the cost of the primary product.

Tablet computer

- Cost of primary product: started at £479
- Probability of adverse event occurring: '15 out of 100 buyers'
- Cost in case of adverse event: £450

²¹ This was paid in the form of YouGov points that were transferrable into shopping vouchers.

²² When we refer to the fair cost of insurance we mean the actuarially fair price which is set so that the insurance premium is equal to the cost of the negative outcome multiplied by the probability of experiencing the negative outcome.

The tablet computer was a cheaper primary product than the home boiler, but the probability of the adverse event (loss or theft) was higher and also the cost in case of the adverse event (replacement) was higher at £450. The cost of the adverse event in this case was therefore nearly as high as the cost of the primary product itself.

Fair insurance for the tablet computer was therefore also quite expensive at £67.50 ($£450 * 0.15 = £67.50$) and therefore represented a relatively high cost when compared to the cost of the primary product.

Laptop computer

- Cost of primary product: started at £980
- Probability of adverse event occurring: '7 out of 100 buyers'
- Cost in case of adverse event: £330

Like the home boiler, the laptop computer was selected as another expensive primary product, but with a slightly higher probability of breakdown yet with a similar cost if the adverse event occurred.

Fair insurance for this laptop would cost £23.10 ($£330 * 0.07 = £23.10$) which, as in the case of the home boiler, represented a relatively small fraction of the cost of the primary product itself.

A luxury holiday for two

- Cost of primary product: started at £4000
- Probability of adverse event occurring: '2 out of 100 buyers'
- Cost in case of adverse event: £3800

The luxury holiday was by far the most expensive item respondents were shopping for and in case of the adverse event occurring (cancellation), the money was almost entirely lost. However, the likelihood of this adverse event occurring was also the lowest amongst all the products at 2%.

As a result, the fair price for insurance £76 ($£3800 * 0.02 = £76$) was not a very large cost relative to the cost of the primary product.

12 day car hire in Spain

- Cost of primary product: started at £190
- Probability of adverse event occurring: '5 out of 100 buyers'
- Cost in case of adverse event: £500

The 12 day car hire in Spain was the only primary product for which the cost in case of the adverse event occurring was larger than the cost of the primary product itself.

Hence the cost of fair insurance £25 ($£500 \times 0.05 = £25$) relative to the cost of the primary product was also reasonably large.

2.2.1 Add-on and standalone insurance

Throughout the experiment respondents had the option to purchase either add-on or standalone insurance or they had the option to choose between the two.

Add-on insurance is defined as insurance which is attached to a certain primary product, i.e. add-on insurance cannot be bought without purchasing the corresponding primary product. In other words, the insurance was combined with the primary product offer, but had a separate price, and the respondents had the freedom to buy the primary product with or without the add-on insurance.

Standalone (or alternative) insurance on the other hand could be bought independently of any primary product, but specifically insured the respective primary product.

2.2.2 Prices for insurance and primary products

Prices for primary products were uniformly distributed between the prices introduced above and a 20% mark-up.

However, all of these prices were set so that purchasing the product was profitable in expectation. That is, the value at which the respondent could 'trade-in' the primary products at the end of the experiment was such that even after taking account of possible loss, in expectation the gains from purchase would cover any losses. This feature was implemented to ensure that respondents could focus on insurance product choices within the experiment.

Prices for insurance (both add-on and standalone) were distributed uniformly between 0.9 times the fair premium and five times the fair premium. That is, any price between slightly less than the fair premium and five times the fair premium was equally likely.

2.3 Experiment treatments

Each respondent was randomly allocated to one of the five treatments, in which they made choices for all available products:

- 'Insurance only'
- 'Up-front add-on'
- 'Add-on at the POS'
- 'Add-on at the POS + easy alternatives'
- 'Add-on at the POS + harder alternatives'

Each respondent was therefore only exposed to one treatment, that is a **between subjects design** was used for this study. Since the experiment was conducted over the internet and only five repetitions were possible given the reasonable length of time respondents could be kept online,

exposing respondents to multiple treatments would have resulted in substantially noisier results and would have eliminated any scope for learning. The downside of using a between subject design is that one individual cannot be observed under multiple treatments, but in return we are able to study differences between treatments with more accuracy.

The following sections introduce each of the treatments in detail.

2.3.1 'Insurance only'

The 'insurance only' treatment serves as a benchmark relative to which the performance in the other treatments can be compared.²³ This treatment is by far the simplest design as respondents only have one task: to search for and potentially buy standalone insurance for a product they already own.

Respondents in this treatment therefore had the following options:

1. Decide whether or not to search for insurance. If they did not wish to purchase insurance, the round was finished straight away.
2. Once respondents decided to reveal the first insurance offer they could decide either to purchase it or to incur another time delay and reveal another insurance offer.
3. After the second offer had been revealed respondents could either purchase the second offer, go back to first offer (instantaneously, without time delay) or reveal further insurance offers by incurring further time delays.

This process continued until either the maximum of 11 offers had been revealed or until the respondent had decided to purchase one of the insurance offers which had been revealed. At any point in the process respondents could choose not to purchase insurance and to proceed to the next task/round.

Figure 5 below shows an example of what the screen in this treatment looked like. More detailed screenshots can be found in Annex 2.

²³ It should be noted however, that in the treatments 'Up-front add-on' and 'Add-on at the POS', respondents may rationally pay a higher price for insurance in order to benefit for lower price primary product. This means that comparisons of *price paid* between the 'insurance only' treatment and these treatments should be done with caution.

Figure 5: Example screen 'Insurance only' treatment

YouGov shopping survey: Scenario 1 of 5

Home boiler

HEATER
28°C

Product title: Home boiler
Product value to you: £1164.00
Potential adverse event: Boiler breaks down and requires emergency repair call out
Cost of adverse event: £370.00
Likelihood of adverse event: 4 out of 100 buyers

Think Again

Full product & scenario description: A home combi boiler providing a high efficiency heating solution. The boiler may break down at some point and require an emergency call out and repair. You can buy an annual insurance policy to insure against this risk. If you don't have insurance, you'll have to pay the cost of call out and repair if the boiler breaks down. The expected cost and likelihood of this are given above.

Cart / Checkout
No items have been selected for purchase.
I don't want to buy insurance

Your purchase
You have successfully purchased this product.
The price you have paid is show below.
Home boiler price: £918.00

Insurance quote 2
Buy insurance separately for: £22.00 **Accept quote**
Search for more quotes...
Go to quote: 1 2

2.3.2 'Up-front add-on'

In the 'up-front add-on' treatment respondents could search for the primary product (that is, they could search for home boilers, luxury holidays, car hires, etc.) and each offer for a primary product also included an add-on insurance offer which was displayed immediately, and right next to, the offer of the primary product. However, search for standalone insurance was not possible. Respondents could therefore only purchase insurance that was associated with a specific primary product.

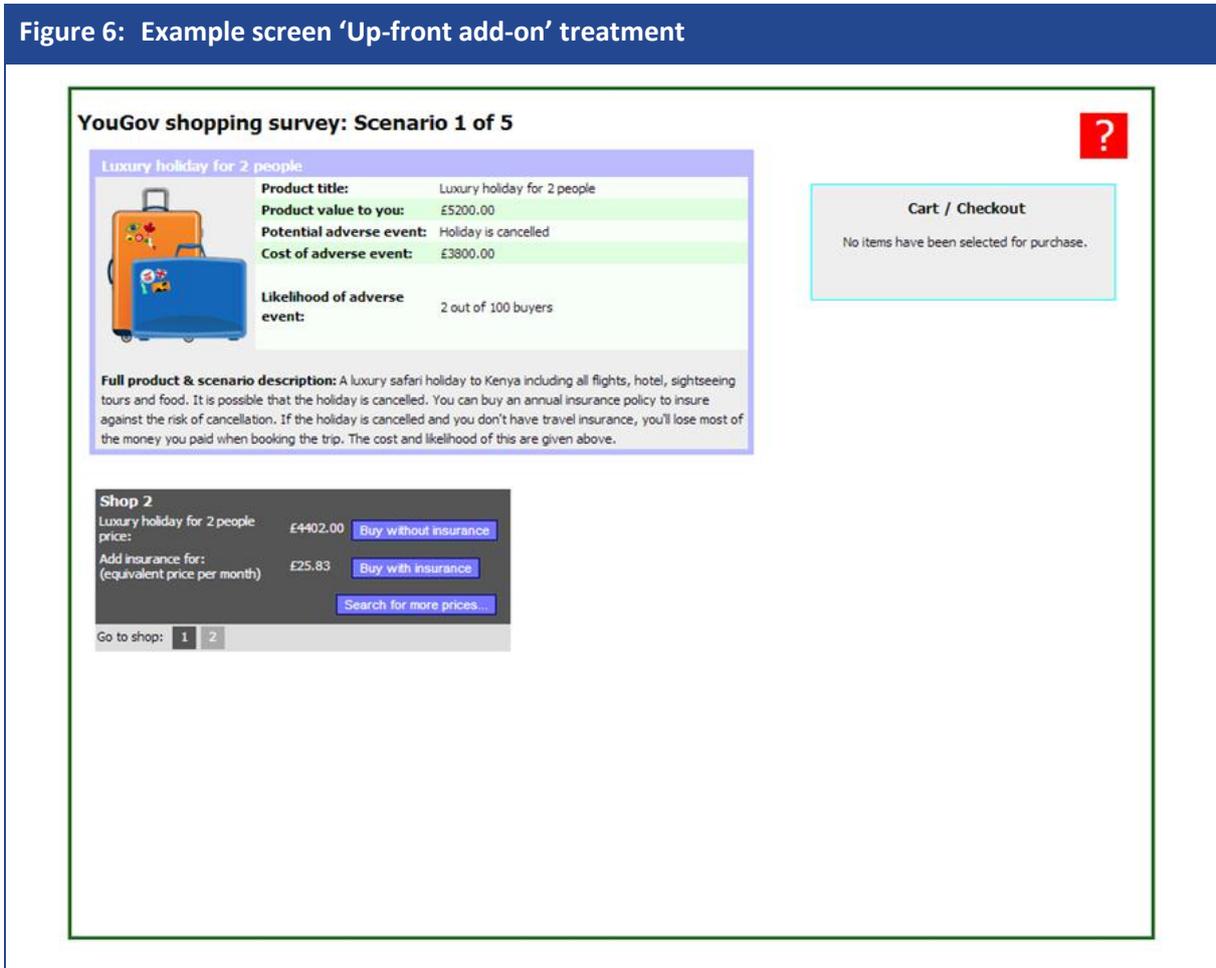
The process through which respondents went in the 'up-front add-on' treatment was as follows:

- 1) Search for a primary product.
- 2) Once the first primary product was revealed, they could either purchase it with or without the add-on insurance.
- 3) If they chose not to purchase the first primary product seen, they could decide to incur another time delay to reveal a second offer for the primary product and the associated

add-on. They could also choose to return to a previous primary offer, costlessly, and reveal the associated add-on insurance.

Again, this continued until the respondent made a choice to purchase the primary product with or without insurance or until the 11th offer had been revealed. A screenshot of this treatment can be seen in Figure 6 below.

Figure 6: Example screen 'Up-front add-on' treatment



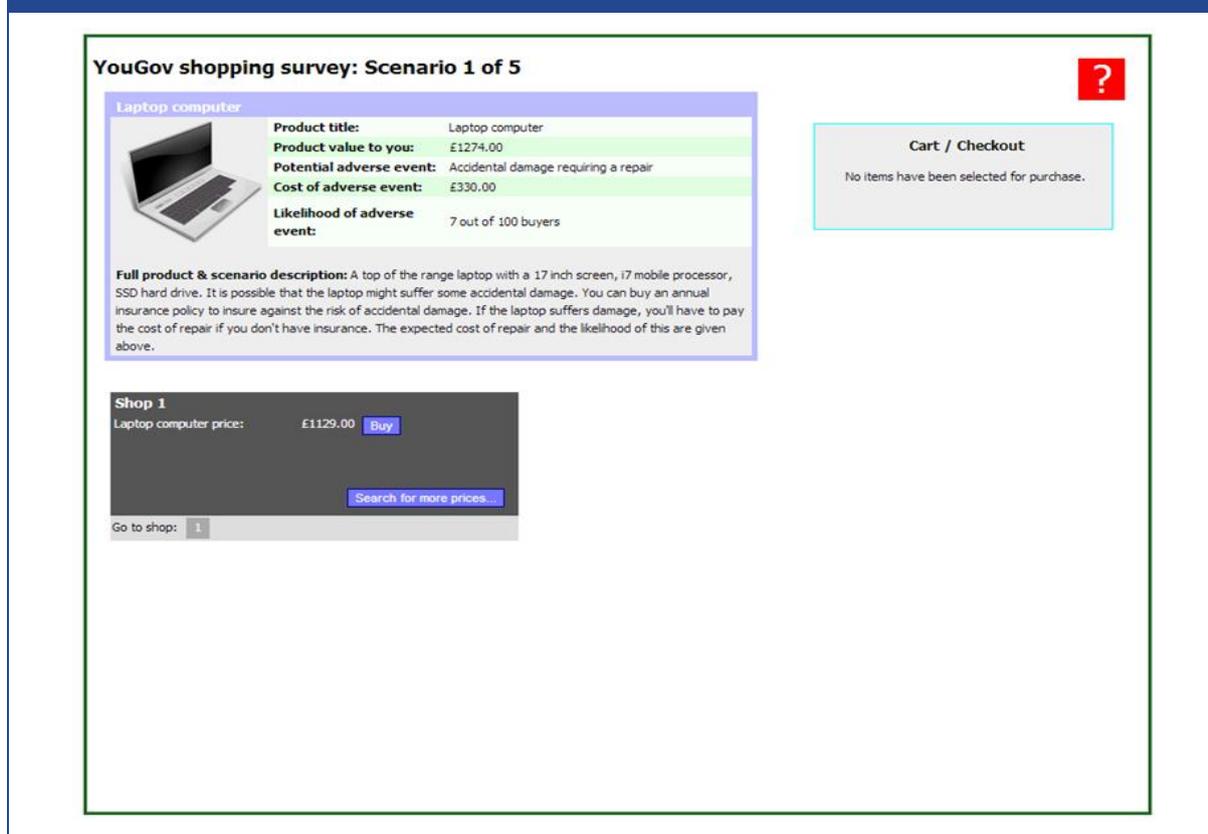
2.3.3 'Add-on at the POS'

The 'add-on at the POS' treatment was identical to the 'Up-front add-on' treatment with the exception that the add-on insurance offer was only revealed after the corresponding primary product had been selected. That is, while respondents searched for one primary product after another, they did not necessarily see the add-on offers associated with the primary products they chose to view. In order to see the associated add-on insurance offer, respondents had to click on the button which said 'Buy'. Upon clicking 'buy' the existence and price of the add-on insurance offer was revealed, and two new buttons appeared: 'Buy without insurance' and 'Buy with insurance'.

At this point, the respondent could costlessly remove the primary product from the shopping basket and return to other primary product offers to reveal the corresponding add-on insurance without incurring any additional time delay.

The only difference between the 'Add-on at the POS' treatment and the 'Up-front add-on' treatment was the fact that the add-on insurance offer was 'dripped', that is the add-on insurance offer was delayed by one screen.

Figure 7: Example screen 'Add-on at the POS' treatment



2.3.4 'Add-on at the POS + easy alternatives'

This treatment was identical to the 'add-on at the POS' treatment presented above, with the exception that the respondent also had the option of searching for alternative standalone insurance.

Effectively, this treatment was a combination of the 'add-on at the POS' treatment and the 'insurance only' treatment previously introduced.

Any differences in behaviour and outcomes between the 'add-on at the POS' treatment and the 'add-on at the POS + easy alternatives' treatment was therefore due to the fact that respondents in the latter had the opportunity to search for alternative (stand-alone) insurance products.

Respondents could easily move between search for primary products (and add-on insurance) and the search for the standalone insurance alternatives. A screenshot of this is shown in Figure 8 below. Importantly, search results from both primary search and standalone insurance search remained on the screen at all times once revealed.

Figure 8: Example screen 'Add-on at the POS + easy alternatives' treatment

YouGov shopping survey: Scenario 4 of 5

12 days car hire in Spain



Product title: 12 days car hire in Spain
Product value to you: £247.00
Potential adverse event: You are involved in a collision
Cost of adverse event: £500.00



Likelihood of adverse event: 5 out of 100 buyers

Full product & scenario description: You are going to Spain for 12 days and will hire a car. The car hire comes with basic car insurance included, but there is a £500 excess (the uninsured part of the repair costs) you have to pay if you have an accident. You can buy an insurance policy to cover the excess for the rental period. If you buy this insurance, you will not have to pay any excess in the event of an accident.



Cart / Checkout

No items have been selected for purchase.

Shop 1

12 days car hire in Spain price: £197.00 [Buy without insurance](#)

Add insurance for: (equivalent price per day) £8.50 [Buy with insurance](#)

[Search for more prices...](#)

Go to shop: 1

Look for independent insurance quotes...

[Search for independent insurance quotes...](#)

Go to quote:

2.3.5 'Add-on at the POS + harder alternatives'

The 'add-on at the POS + harder alternatives' treatment was set up exactly as the 'add-on at the POS + easy alternatives' with the exception that respondents could no longer easily move between the search for primary products (and add-on insurance) and the search for standalone insurance. If the respondent decided to search for alternative standalone insurance offers, the box displaying the offers for the primary product and the add-on insurance disappeared, and vice versa when the respondent searched for the primary product. However, the respondent only needed to click once to switch between the two searched modes – similar to the amount of effort required to switch to a new tab in a web browser.

An example of this is shown in Figure 9 below.

Figure 9: Example screen 'Add-on at the POS + harder alternatives' treatment

The screenshot shows a survey titled "YouGov shopping survey: Scenario 3 of 5". It features a product card for a "Tablet computer" with a "Pad" icon. The product details include a title, value to you (£624.00), potential adverse event (loss, theft or breakdown), and cost of adverse event (£450.00). A likelihood of adverse event is shown as "15 out of 100 buyers". A full product & scenario description is provided below. To the right, a "Cart / Checkout" box indicates "No items have been selected for purchase." Below the product card, there is a button to "Click here to see & search for Product prices..." and an "Insurance quote 1" section showing a quote for £206.00 with "Accept quote" and "Search for more quotes" buttons. A "Go to quote: 1" dropdown is also visible.

2.4 Frames

In addition to the treatments outlined above, participants were also randomly allocated to one of the following labelling scenarios:

- Yearly price framing
- Monthly price framing
- Product labels removed

In the yearly price frame, the prices for add-on and standalone insurance offers were displayed as lump sums. Generally prices were presented as 'yearly', but for the 12 day car hire the lump sum price of insurance referred to the whole 12 days.

In the monthly price frame, prices were displayed as their monthly equivalent (or in the case of car hire their daily equivalent). However, as soon as a respondent placed an insurance product into their shopping basket, the price was multiplied by 12 and the final sale price was shown the same way it was shown in the yearly price frame. The instructions the respondents read before starting the experiment, and to which they could return to at any point in the experiment, also clearly told them the insurance was framed as a monthly cost.

These two framing variations were introduced in order to test if there was an effect on price paid, take-up and error making when prices were framed in a lump sum as opposed to broken into smaller components.

The final frame involved the removal of the product description itself. Prices were lump sum, as in the yearly frame, but respondents no longer searched for and purchased 'home boilers', but instead just bought 'product 1', 'product 2', etc. Similarly, the loss events and insurance products were also unlabelled.

This frame was introduced to test if respondents' choices in the experiment were sensitive to the types of products they were asked to purchase. For example, it could be the case that respondents had some preconceived ideas that some products required insurance and others did not. By introducing an unlabelled frame, we were able to test for and remove any such biases.

The unlabelled frame was only introduced to respondents in the 'Add-on + harder alternatives' treatment and in the 'insurance only' treatment as these were considered to be the most complicated and the simplest treatments respectively. In the 'insurance only' treatment the task was to search for and purchase the cheapest insurance only. In the 'Add-on + harder alternatives' treatment respondents had to search for the primary product, the add-on and alternative standalone, and to choose the cheapest option of primary and insurance while incurring the highest barrier in accessing the standalone alternatives, therefore making this task the most cognitively difficult.

2.5 Questionnaire

In addition to the experiment, each respondent completed a short questionnaire. The questionnaire included questions to test respondents' financial literacy, risk aversion and cognition; and, included a question on financial confidence and previous experience in the insurance market. The questionnaire is presented in Annex 3.

2.6 Randomisation across treatments

Respondents were randomly allocated to one of the five treatment designs.

Although our analysis controls for socio-demographic characteristics, it is important to note that there were slight differences across the various treatments.

Table 2: Socio-demographic characteristics, by treatment

	Average age	Percentage of male respondents	Percentage correctly answering financial literacy question	Percentage correctly answering cognitive ability question	Average social class (1= upper or middle class, 2=working class)	Income (out of 15 categories)
Insurance only	52	64%	83%	36%	1.3	8.4
Up-front add-on	53	67%	77%	36%	1.2	9.1
Add-on at POS	54	68%	81%	35%	1.2	8.7
Add-on at POS + easy alternatives	53	60%	79%	35%	1.2	8.3
Add-on at POS + harder alternatives	50	58%	75%	38%	1.3	8.3
Overall	52	63%	79%	36%	1.3	8.5

There was no difference in drop-out rates between treatments across the key socio-demographic variables - age, income, socio-demographic group- or quiz score.

3 Experiment results

The following sections outline the results of the experiment. In particular, they discuss:

- Search behaviour
- Take-up of insurance
- Price paid for insurance
- Errors/mistakes and losses
- Profits made by insurance providers
- The importance of monthly/yearly labelling
- Differences across products

3.1 Search

Respondents in the experiment could ‘search’, or shop around, for additional offers in the following ways:

- They could search for additional ‘primary products’, e.g. additional offers for tablet computers.
- They could search for additional insurance offers:
 - By searching for alternative standalone insurance offers.
 - By revealing the add-on insurance offers which were associated with the primary products (only in the ‘Add-on at the POS’ treatments).

This section analyses how the search behaviour for both primary products and insurance offers was affected by the various treatments.

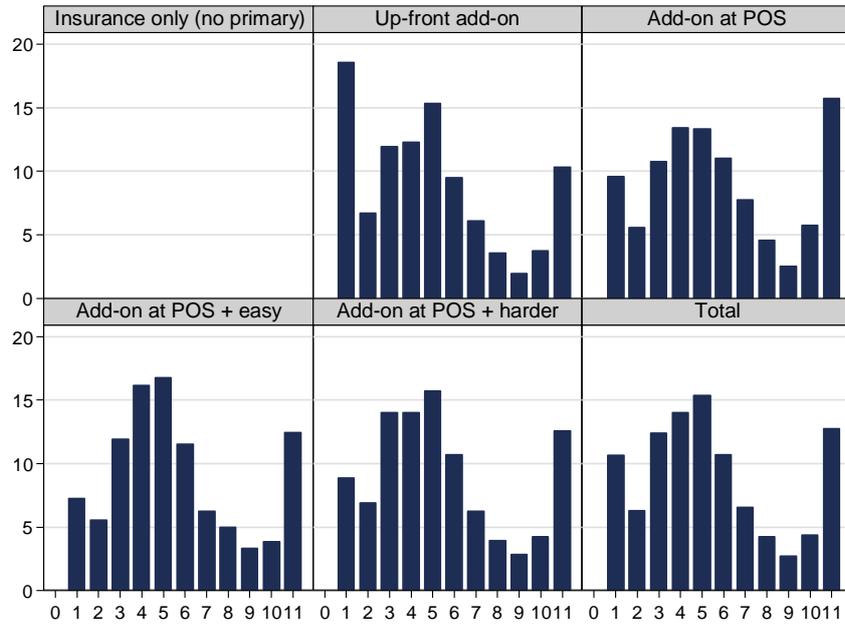
3.1.1 Search for primary products

None of the treatments affected the way in which respondents searched for primary products, as such search behaviour for the primary product was very similar across treatments (see Figure 10).

The one exception to this was that participants in the ‘Up-front add-on’ treatment searched for a smaller number of primary products than respondents in any other treatment. They were found on average to search for 0.94 fewer primary products²⁴ than those in the ‘Add-on at the POS’ treatment.

²⁴ Statistically significant at 1% level

Figure 10: Number of searches for the primary product carried out, by treatment



3.1.2 Number of insurance offers viewed

As outlined above, there were two ways of increasing the number of insurance offers a respondent chose to view: by revealing add-on insurance offers associated with the primary product and by searching for alternative standalone insurance.

However, when analysing the number of insurance offers viewed by participants in each treatment, it is important to remember that search for alternative standalone insurance offers, in addition to add-on insurance offers, was only possible in the last two treatments. In these treatments it was therefore possible to view 22 insurance offers, whereas in the first three treatments it was only possible to view a maximum of 11 insurance offers.

There are three main results regarding the number of insurance offers respondents chose to view:

- 1) Respondents in the 'Add-on at the POS' treatment chose to view by far the fewest offers and over 70% of respondents in this treatment chose to view only one single offer.
- 2) Introducing alternative standalone insurance offers, available to respondents at the point they choose to buy a primary product, led to significantly more insurance offers being viewed.
- 3) The easier it was to access the alternative standalone insurance offers, the more insurance offers were viewed.

The first result stands out clearly in Figure 11 below. Seventy-two percent of participants in the 'Add-on at the POS' treatment did not view more than one offer. The vast majority of respondents in this treatment therefore only ever saw the one insurance offer which was associated with the primary product they purchased.

By comparing the behaviour of participants in the 'Add-on at the POS' treatment with those in the 'Up-front add-on' treatment, we can explore the impact of delaying the insurance offer until the consumer selected the primary product offer. In all other regards, these two treatments were identical, meaning that any difference between these two treatments was due to this particular design feature. We find that the introduction of delaying the insurance offer led to participants viewing 2.7 fewer offers on average.²⁵

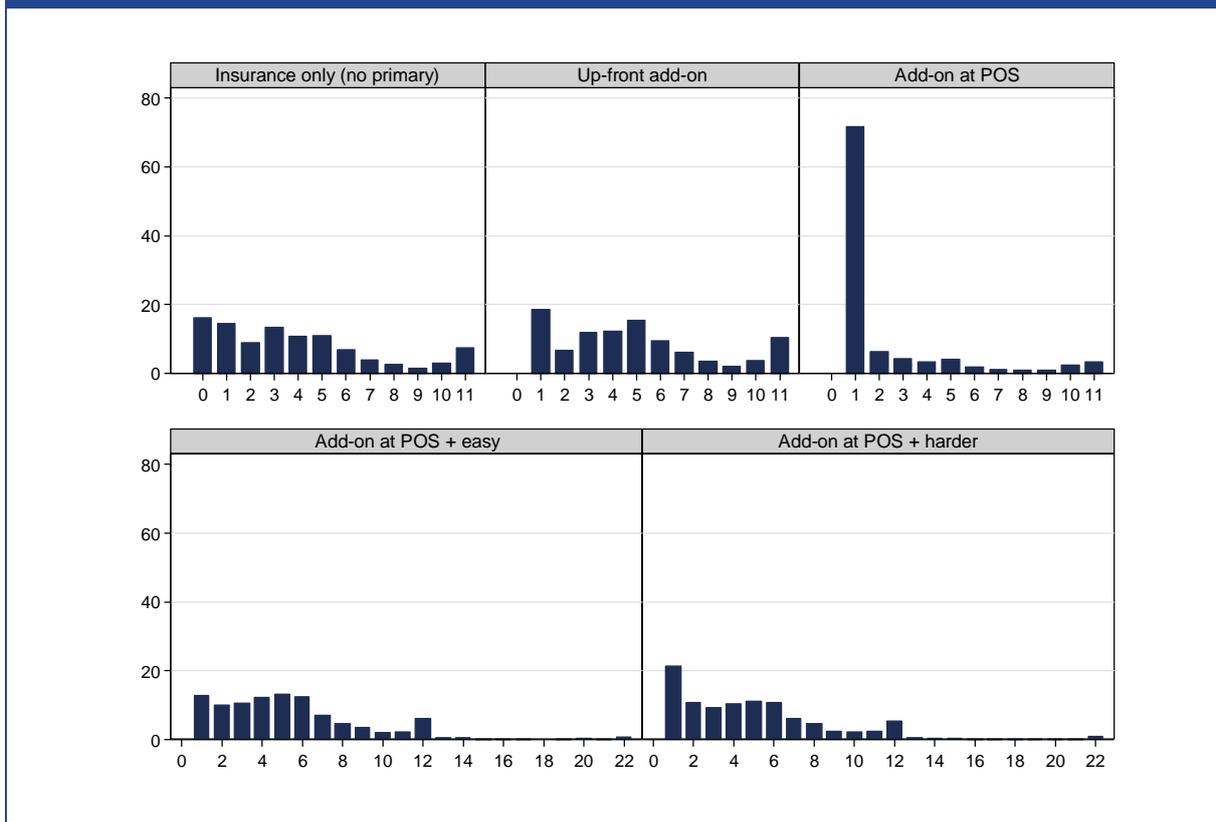
The second finding, namely that introducing alternatives at the POS lead to a significant increase in the number of insurance offers, can be seen by comparing the average number of insurance offers viewed in the 'Add-on at the POS' treatment with the average number of insurance offers viewed in the 'Add-on at the POS + easy alternatives' or 'Add-on at the POS + harder alternatives' treatments. Respondents in the easy alternatives treatment viewed, on average, 3.24 offers more than those in the 'Add-on at the POS' without alternatives treatment; and, respondents in the

²⁵ Statistically significant at the 1% level and robust to the inclusion of socio-demographic control variables.

harder alternatives treatment viewed 2.75 offers more than respondents in the ‘Add-on at the POS’ without alternatives treatment.²⁶

Finally, the third result can be seen by comparing the last two treatments. In the treatment in which it was slightly harder to search for alternatives, respondents viewed on average 0.49 fewer insurance offers than in the treatment in which it was slightly easier to search for alternatives.²⁷

Figure 11: Number of insurance offers seen, by treatment



3.1.2.1 Purchase of the first insurance offer seen

A potentially negative outcome of certain formats which trigger behavioural biases or make it more difficult to search for insurance is that consumers could decide to just purchase the first insurance offer they can find, without taking the time to compare offers and purchase the best available deal.

²⁶ Both of these results are statistically significant at the 1% level and robust to the inclusion of socio-demographic control variables.

²⁷ Statistically significant at the 10% level. Significant at the 5% level once controls for socio-demographic characteristics are included.

Given the welfare losses for consumers that could be associated with this behaviour, it is important to ensure that people are not deterred from searching for different insurance offers. Therefore we have analysed the proportion of respondents in each of the treatments that purchased insurance and decided to purchase the first insurance offer that they viewed.

The following three results emerged as regards purchasing the first offer viewed:

1. 65% percent of all respondents who purchased insurance in the 'Add-on at the POS' treatment purchased the first offer they viewed in comparison to only 17% who did so in the 'Up-front add-on' treatment.
2. Introducing the option to search for alternative standalone insurance dramatically reduced the percentage of respondents that purchased the first offer viewed.
3. Making the search for alternative standalone insurance more difficult resulted in an increase in the proportion of respondents who purchased the first offer they viewed.

Given the fact that over 70% of respondents in the 'Add-on at the POS' treatment only viewed one offer, it is not surprising that of those individuals that purchased insurance, 65% bought the first insurance offer they viewed. This compares to 17% of respondents who bought insurance in the 'Up-front add-on' treatment purchasing the first insurance offer they viewed, which is a very similar level to the 'Insurance only' treatment. As a result, it can be concluded that delaying the insurance offer until the POS made participants 48 percentage points more likely to purchase the first insurance offer they viewed.²⁸

The second result can be seen by comparing the 'Add-on at the POS' treatment to the 'Add-on at the POS + easy alternatives' or 'Add-on at the POS + harder alternatives'. Once again, allowing respondents to search for alternative offers resulted in an improvement, in the sense that fewer respondents purchased the first offer viewed.²⁹

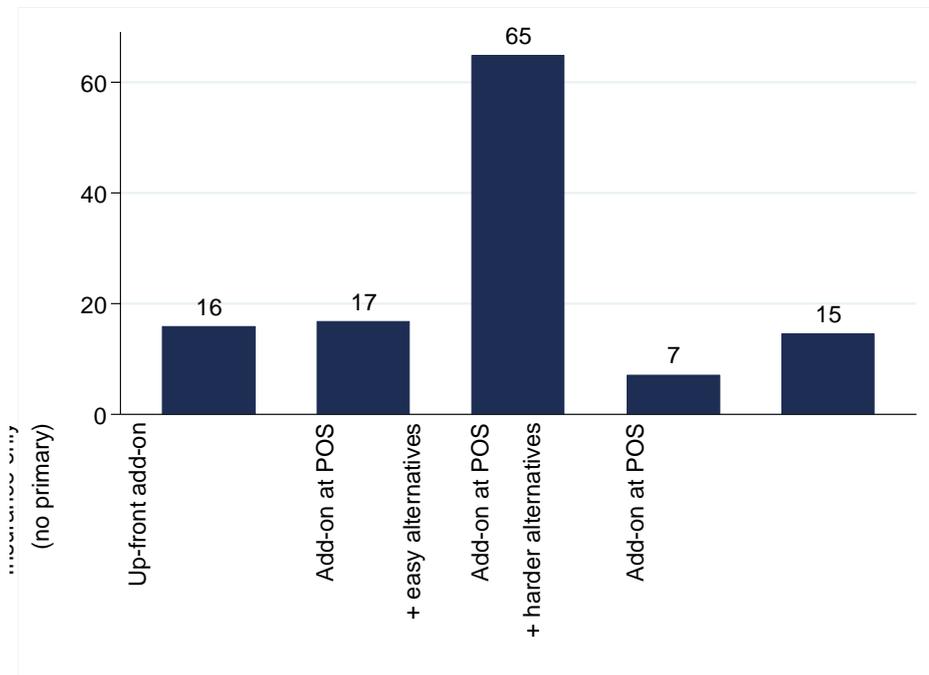
Similarly, making this search for alternatives only slightly more difficult had a large effect on the number of respondents who bought the first offer seen. Among those participants who purchased insurance, the proportion who purchased the first offer viewed in the 'Add-on at the POS + harder alternatives' is 8 percentage points higher than in the 'Add-on at the POS + easy alternatives' treatment.³⁰ By making the search and comparison of insurance offers easier, more people decided to shop around beyond the first insurance offer they viewed (see Figure 12).

²⁸ Statistically significant at the 1% level and robust to the inclusion of socio-demographic control variables.

²⁹ Statistically significant at the 1% level and robust to the inclusion of socio-demographic control variables.

³⁰ Statistically significant at the 1% level and robust to the inclusion of socio-demographic control variables.

Figure 12: Proportion of those participants that bought insurance who bought the first insurance offer that they viewed without further search



3.2 Insurance take-up

The next measure presented is insurance take-up in order to identify how this was impacted by the differing design set-ups. This analysis provides insights into whether or not different design set-ups can artificially inflate (or reduce) the demand for insurance products.

However, it is important to note that not all five treatment designs can be directly compared to each other. Participants could potentially view twice as many insurance offers in the last two treatments than in the other treatments. It is therefore more likely that they would be able to find an insurance price which they were satisfied with and hence it was expected that these two treatments would have the higher take-up rates.

Overall, the percentage of respondents who took-up insurance ranged from 69% to 85% across the five treatments. As expected, the treatments that were found to have the highest insurance take-up rates were those treatments in which respondents could also search for alternative insurance offers (treatments 'Add-on at the POS + easy alternatives' and 'Add-on at the POS + harder alternatives').

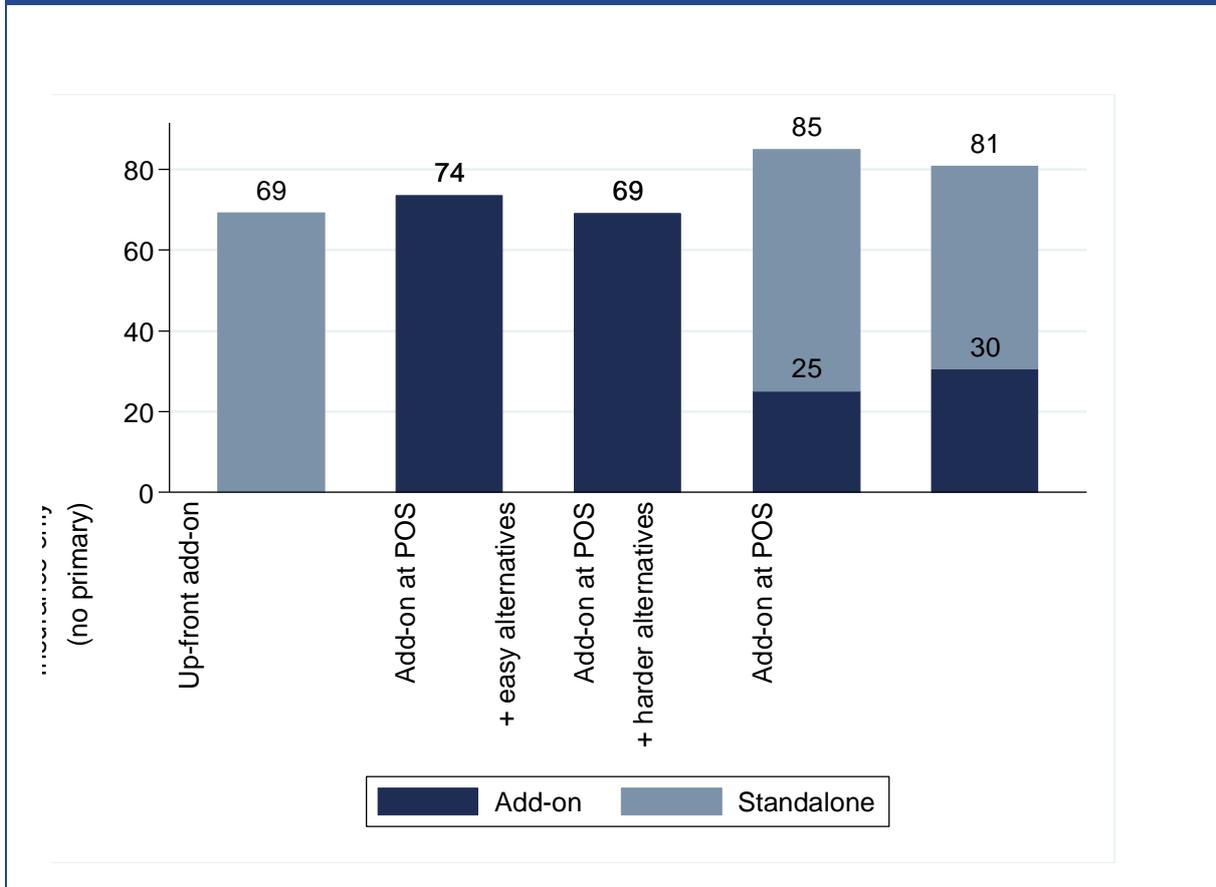
In addition, we also find the following treatment effects with respect to take-up of insurance:

1. Controlling for the number of insurance offers seen:
 - a. take-up was not affected by delaying (or dripping) the insurance offer;
 - b. take-up was higher when alternative insurance offers were introduced; and,
 - c. take-up was not affected by making search for alternatives easier or harder.
2. Making it harder to search for alternatives reduced the take-up of standalone alternative insurance in favour of a higher take-up of add-on insurance.

We find that dripping or delaying the add-on insurance led to 5 percentage point decrease in the proportion of participants purchasing add-on insurance.³¹ However, when controlling for the number of insurance offers viewed, we find no difference between the take-up of insurance between the 'Add-on at the POS' and the 'Up-front add on' treatments. This suggests that the take-up rates would be more similar if participants had searched for the same number of insurance offers in each treatment. The difference in take-up between the 'Insurance only' and the 'Up-front add-on' treatments is (also) not statistically significant when we control for the number of insurance offers viewed.

³¹ 74% in Up-front add-on and 69% in Add-on at POS.

Figure 13: Proportion of participants who chose to purchase insurance, by treatment and type of insurance



Comparing the final two treatments, participants in the ‘Add-on at the POS + harder alternatives’ treatment were 4% more likely to buy add-on insurance³²; and, 8% less likely to buy standalone insurance³³ than participants in the easy alternatives treatment, having controlled for the number of insurance offers viewed.

We find that when controlling for the number of insurance offers viewed, there is no statistically significant difference between the overall take-up of insurance in the two treatments with alternative standalone insurance offers.

However, when comparing the take-up of insurance in treatments in which respondents had access to alternative standalone offers to treatments where there were no alternatives to add-ons (i.e. the last two treatments relative to the first three treatments) we do find that take-up is significantly greater, even controlling for the number of insurance offers seen. As discussed

³² Statistically significant at the 5% level and robust to the inclusion of socio-demographic control variables.

³³ Statistically significant at the 1% level and robust to the inclusion of socio-demographic control variables.

previously, this is likely due to the fact that respondents can simply find better offers when they have access to twice as many insurance offers.

3.3 Price paid for insurance

A further outcome of interest for comparison across the treatments is the price paid for insurance. We will begin by comparing the average price paid for insurance to see how this was affected by the changes that occurred across the different treatments. This shall be followed by analysis of the proportion of participants that paid more than the actuarially fair price for insurance and analysis of the proportion of insurance offers accepted at varying price ranges relative to the fair premium. Finally, we will discuss how the average amount of money spent on the primary product and insurance combined, varied across the products.

3.3.1 Average price paid for insurance

Before analysing the price paid for insurance, it should also be noted that in all treatments other than the 'insurance only' treatment, it may have been in the participants' interest to buy a more expensive add-on insurance, if this higher insurance price was more than compensated for by a lower primary product price. In other words, the cheapest combination of primary product and insurance may not have included the cheapest insurance offer.

Bearing this caveat in mind, the highest average price paid for insurance was found in the 'Add-on at the POS' treatment and the lowest in the 'Add-on at the POS + easy alternatives' and 'Add-on at the POS + harder alternatives' treatment.

We identify the following treatment effects regarding price paid for insurance:

- 1) Delaying the insurance offer to the POS (dripping) resulted in a higher average price paid for insurance.
- 2) Introducing alternative insurance offers at the POS lead to a lower average price paid for insurance.
- 3) Making it harder to search for alternatives resulted in a higher average price paid for insurance.

By comparing the average price paid for insurance in the 'Add-on at the POS' treatment to the average price paid for insurance in the 'Up-front add-on' treatment, it is possible to identify the effect of delaying (or dripping) the insurance offer. As these two treatments were completely identical apart from this design feature, any difference in average price paid for insurance was due to the fact that insurance offers are 'dripped' as opposed to being made up-front.

We find that the average sale price in the 'Add-on at the POS' treatment was 13 experimental currency units higher than it was in the 'Up-front add-on' treatment.³⁴ This can be seen in Figure 14, where the average sale price in the 'Up-front add-on' treatment was 89 units and in the 'Add-on at the POS' treatment it was 102 units.

By comparing the 'Add-on at the POS' treatment to the two 'Add-on + alternatives' treatments, we find that allowing respondents to search for alternative insurance offers resulted in a decrease in average price paid (37.25 experimental currency units or a 37% drop in average price paid). In part, this result is due to the fact that respondents had access to more offers, but the difference in price remains large and strongly significant also when controlling for the number of insurance offers viewed.

Through making it slightly harder to search and compare offers in the 'Add-on at the POS + harder alternatives' treatment, we find that participants paid on average 6.2 units of experiment currency more. These differences can be seen in Figure 14, which also demonstrates that this difference was mostly driven by a higher price paid for the add-on insurances purchased.³⁵ However, there is a much smaller difference in the average prices paid for standalone insurance between these two treatments and this is not found to be statistically significant.

Further, it should be noted that the higher add-on sale price in the 'harder alternatives' treatment than in the 'easier alternatives' treatment, was largely driven by women paying more in this treatment. As can be seen in Figure 15 overleaf, women on average paid 11 units of the experimental currency more in the harder alternatives treatment than in the easy alternatives treatment. For men on the other hand this increase was only 3 units of experimental currency. Considering that women were somewhat underrepresented in our sample, it is therefore likely that the average effect in the general population would be even larger than the average effect observed here.

³⁴ Statistically significant at 1% level and robust to the inclusion of socio-demographic variables.

³⁵ Statistically significant at 1% level.

Figure 14: Average price paid for insurance, by treatment

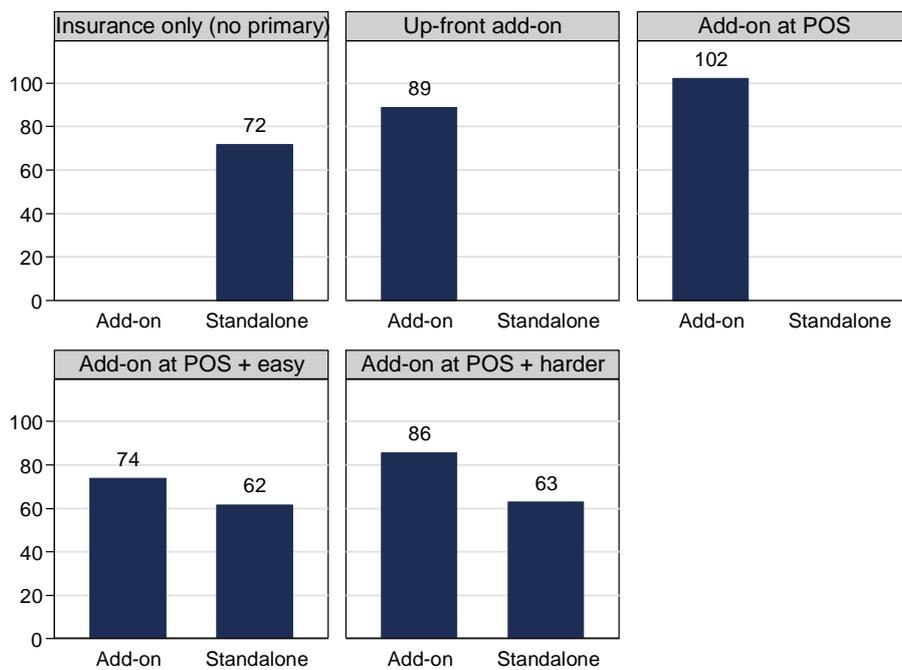
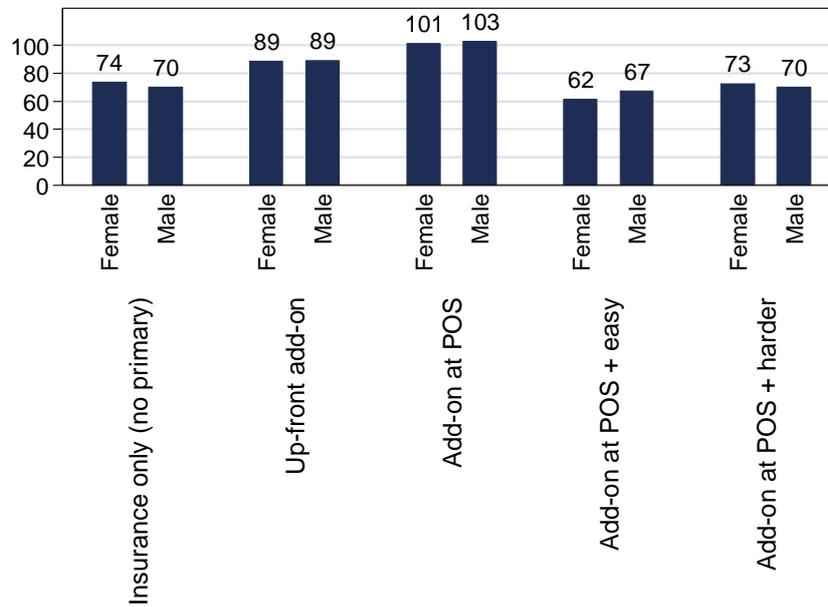


Figure 15: Average price paid for insurance, by treatment and gender



3.3.2 Price sensitivity

Another research area that this experiment has allowed us to investigate is whether different framings of insurance offers altered respondents' insurance offer price sensitivity.

Below we present the proportion of insurance offers that were purchased at varying prices as a proportion of the fair price across the different treatments. As previously outlined, prices for insurance in the experiment varied between 0.9 times the fair price and five times the fair price. Figure 16 below plots the proportion of offers that were bought as a function of the price of the insurance relative to the fair price. The x-axis of Figure 16 ranges from 0.9 to 5 and gives the price for an insurance offer relative to the fair price. The number 1 on the x-axis indicates when offers bought were at the fair price. The y-axis indicates what percentage of offers were bought.

The downward sloping curve therefore indicates that as the actual price relative to the fair price increases, fewer offers were accepted.

Before comparing the treatments against each other, it should be noted that respondents in the add-on only treatments ('Up-front add-on' and 'Add-on at the POS') may have had good reason to

purchase more expensive insurance than respondents in the other treatments. In the add-on only treatments a cheaper primary product could more than make up for an expensive insurance offer. In all other treatments the presence of standalone insurance meant that respondents had a larger incentive to identify the cheapest insurance offer. In addition, as stated previously, any difference between these two treatments was due to the difference in presentation of the add-on insurance. That is, delaying the revelation of the existence and price of the add-on insurance offers.

Bearing the previous caveat in mind, we note that:

- 1) Price sensitivity was higher in all treatments which involved an option for alternative standalone insurance search than in those treatments which only included insurance add-ons.
- 2) In the 'Add-on at the POS' treatment take-up of insurance was not strongly related to the price of the insurance as a proportion of the fair premium.

The above findings can be seen by comparing the shape of the curves in the add-on treatments to those of the treatments including standalone search. For all treatments which included a standalone search, the vast majority of offers below the fair premium (0.9 on the x-axis) were accepted (88% in 'Insurance only', 84% in 'Add-on at the POS + easy alternatives' and 80% in 'Add-on at the POS + harder alternatives').

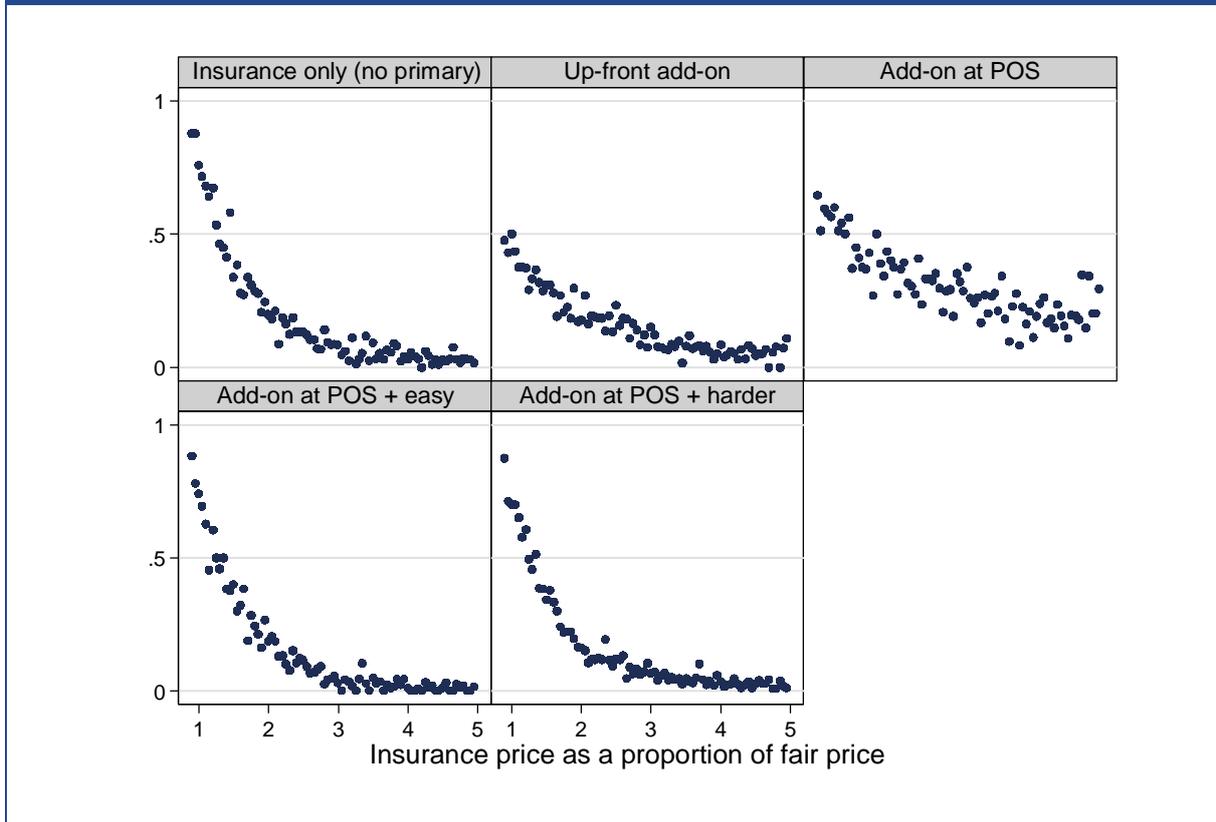
In the 'Up-front add-on' treatment on the other hand, only 46% of insurance offers below the fair premium were accepted. Delaying the add-on offer to the POS led to 57% of offers below the fair premium being accepted, well below the treatments with standalone search.³⁶

Similarly, looking at the highest end of the price distribution, we see that 23% of offers in the 'Add-on at the POS' treatment which are priced above 4.5 times the fair premium are bought. In all other treatments, and particularly in the standalone treatments, this proportion is significantly lower (3% in 'Insurance only', 5% in 'Up-front add-on', 1.2% in 'Add-on at the POS + easy alternatives' and 2.45% in 'Add-on at the POS + harder alternatives').

Overall, take-up of insurance offers rapidly declined in the treatments which included alternative insurance offers (or insurance only) once prices reached three times the fair premium, yet this cannot be observed in either the 'Add-on at the POS' or 'Up-front add-on' treatments. Further, we observe more noise in the data in the 'Add-on at the POS' data indicating less of a relationship between take-up and insurance price as proportion of the fair premium in this treatment (however we still observe a downward trend).

³⁶ Differences are statistically different from zero at the 1% level.

Figure 16: Proportion of insurance offers bought at different prices in terms of fair price of insurance



While take-up of insurance in general was quite sensitive to changes in price, it is interesting to see that this does not imply that the proportion of respondents purchasing the first insurance offer viewed was also responsive to price. As can be seen in Figure 17, the proportion of respondents who simply purchased the first offer they come across hardly responded to the cost of the first insurance offer seen.

It is clear from Figure 17 that the fraction of respondents purchasing the first offer viewed was significantly higher in the 'Add-on at the POS' treatment than in all other treatments, but there appears to be no noticeable trend that as the first insurance offer viewed is more expensive, fewer were accepted.

This suggests that some respondents simply always purchased the first insurance offer viewed and that the demand for insurance of these respondents was not particularly sensitive to the price of the insurance offered.

Similarly, Figure 18 demonstrates that the responsiveness to price of those who purchased the first insurance offer viewed did not vary systematically across products either.

Figure 17: Proportion of participants that purchased the first insurance offer viewed relative to the price of the first insurance offer as a proportion of the fair price, by treatment

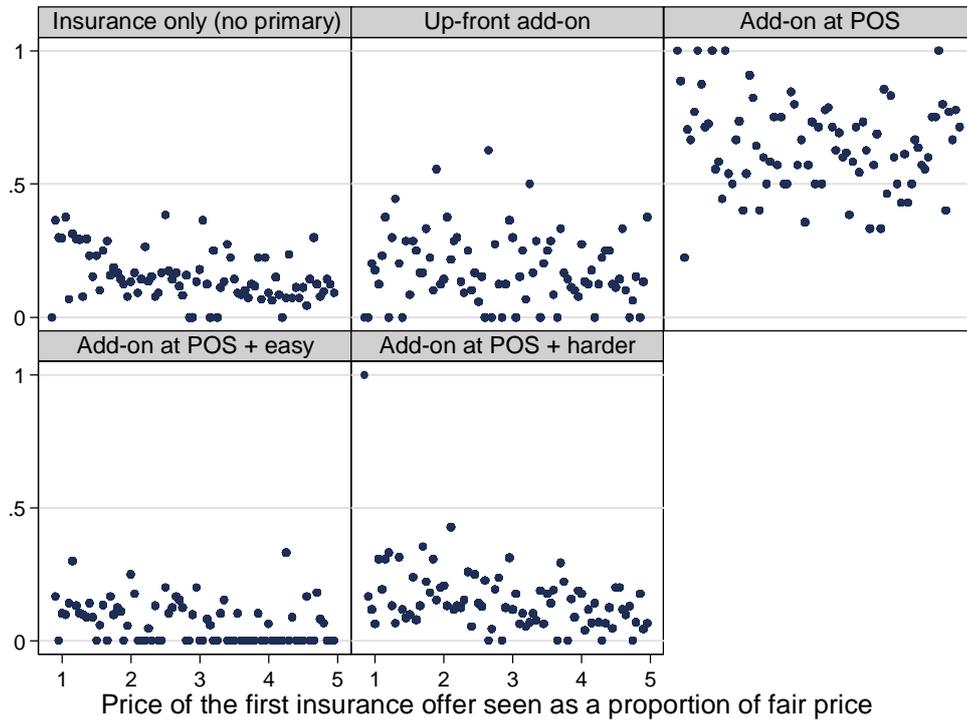
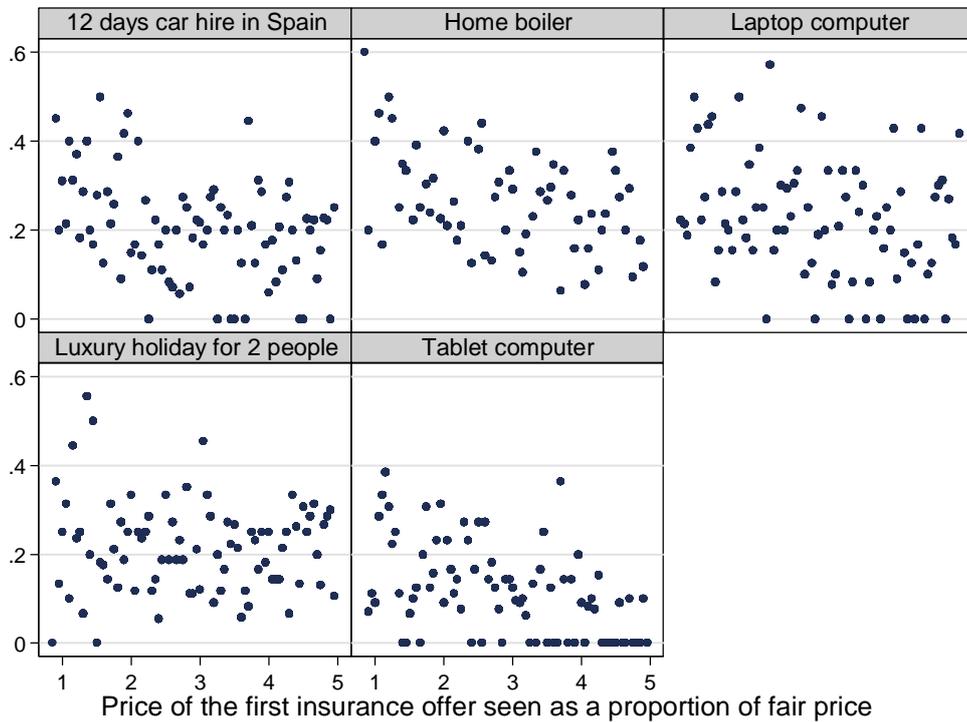


Figure 18: Proportion of participants purchasing the first insurance offer viewed relative to the price of the first insurance offer as a proportion of the fair price, by product



3.3.3 Average amount of money spent in total

There was a large amount of variation in the total amount of money spent on the primary product and insurance across the five treatments. Since participants in the 'Insurance only' treatment did not have to search for the primary product, and were simply informed of the price they had paid, this treatment will not be included in the analysis of total amount of money spent.

The only treatment effect which could be identified is that the total amount of money spent by participants in the treatments which included an option to search for alternative standalone insurance offers was significantly lower than in the treatments without such alternatives.

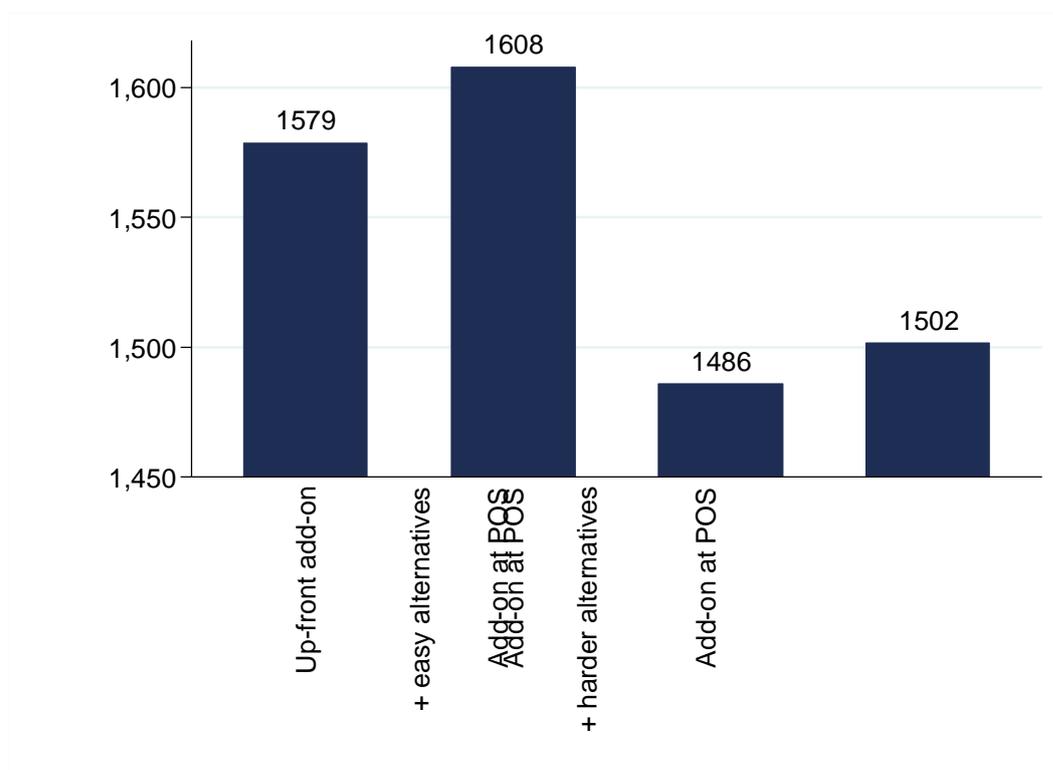
Participants spent much less money in the two 'Add-on at the POS + alternatives' treatments than in the treatments without the standalone insurance option.³⁷ This finding is likely in part due to the fact that participants in the 'Add-on at the POS + alternatives' treatments were able to view

³⁷ Statistically significant at the 1% level. Significant at the 10% level once controls for socio-demographic characteristics are included.

eleven more insurance offers than in the other treatments. However, the difference remains significant (at the 5% level) even when controlling for the number of insurance offers viewed.

There are no statistically significant differences between the amount of money spent in 'Up-front add-on' and 'Add-on at the POS'; and, between 'Add-on at the POS + easy alternatives' and 'Add-on at the POS + harder alternatives'.

Figure 19: Average amount of money spent in total, by treatment



3.4 Loss and error measures

An important element of this study was to identify to what extent the designs under consideration affect the well-being of consumers. Due to the nature of insurance, it was not possible to assess whether one design objectively raised or lowered consumer welfare in general. For example, for very risk-averse individuals taking out insurance even at very high prices may be optimal, while for others this would be a mistake. Similarly, for some respondents with high opportunity cost of time it could be considered a mistake to spend too much time searching for insurance offers, while for others, more search would be optimal. Both of these individual level characteristics are ultimately unobservable to the researcher.³⁸

We therefore calculated two measures of *error* and *loss* which are independent of the level of risk-aversion or the respondents' opportunity cost of time. The loss measures calculated only require that the objective of the task was the same in each treatment. That is, respondents prefer more earnings to less and therefore the objective was to minimise the cost of purchases in each treatment.

The first error measure is defined as the proportion of participants that did not choose the cheapest primary product and/or insurance offer that was available to the respondent given the amount of search he or she did. That is, the respondent made a mistake and did not choose the best deal available. It is important to note that this error measure is based on all insurance offers available to the respondent, including those add-on insurance offers that respondents did not choose to view when they had viewed the respective primary good offer.

The second error measure is calculated in the same way, but instead of considering all insurance offers available to the respondent, only those which he or she chose to view are considered. Error 2 therefore captures the extent to which respondents made the mistake of 'forgetting' about a cheaper offer or made a computational mistake in combining the primary product and standalone insurance/add-on insurance.

Loss measure 1 is the amount of money lost in the experiment when the respondent made the first type of error. Loss 2 is the amount of money lost when the respondent made the second type of error. If a respondent made no errors then the loss was zero.

Since the 'Insurance only' and 'Up-front add-on' treatments did not have any form of dripped or delayed insurance offers that could to be revealed, there is no difference between the first and second loss measures in these treatments. This is because if a respondent viewed the primary product in 'Up-front add-on' then they had to view the associated insurance. In 'Insurance only' respondents only searched for insurance.

³⁸ The questionnaire did include a question on risk aversion and we test the impact of risk aversion on behaviour in the experiment in section 4.

An important limitation of these two error and loss measures, is that the likelihood of making a mistake is increasing in the number of searches made. For example, a respondent who simply purchased the first offer available could not make any mistakes. When comparing average loss between treatments, we therefore control for the number of insurance offers seen by each respondent.

3.4.1 Error and loss measure 1

Respondents made the first type of error/mistake if they failed to choose the best deal out of all deals available to them. That is, error and loss measure 1 take into account the add-on insurance offers that respondents could have viewed costlessly given they had already viewed the associated primary product. The loss measure is the earnings in the experiment respondents lost because they made error 1.

The 'Insurance only' treatment had the lowest error and loss, which may result from the fact that participants did not have to search for the primary product and hence had fewer decisions in which to make a mistake, as they only had to choose which insurance to purchase if any. The highest error and loss on the other hand was in the 'Add-on at the POS' treatment.

Overall, the following treatment effects emerge:

- 1) Providing the insurance offer up-front increased errors and losses compared to when respondents shopped for standalone insurance only.
- 2) Delaying (or dripping) the insurance offers to the POS lead to significantly higher losses and to more respondents making mistakes.
- 3) Introducing alternative standalone insurance offers reduced the losses made and lead to fewer people making mistakes.
- 4) For purchases involving add-ons offered at the POS about half of the mistakes made were due to respondents choosing the cheapest primary product offer, but not the best overall deal. This suggests that when add-ons were offered at the POS, prices of the primary product dominated the decision-making.

These effects are robust to controlling for the number of insurance offers seen.

Figure 20 shows the proportion of participants that failed to choose the best deal. Errors increased when respondents were required to shop around for add-on insurance in the 'Up-front add-on treatment' compared to the 'Insurance only treatment'.³⁹ Furthermore, errors were much higher when the add-on insurance offer was delayed to the POS. In the 'Add-on at the POS'

³⁹ Statistically significant at 1% level.

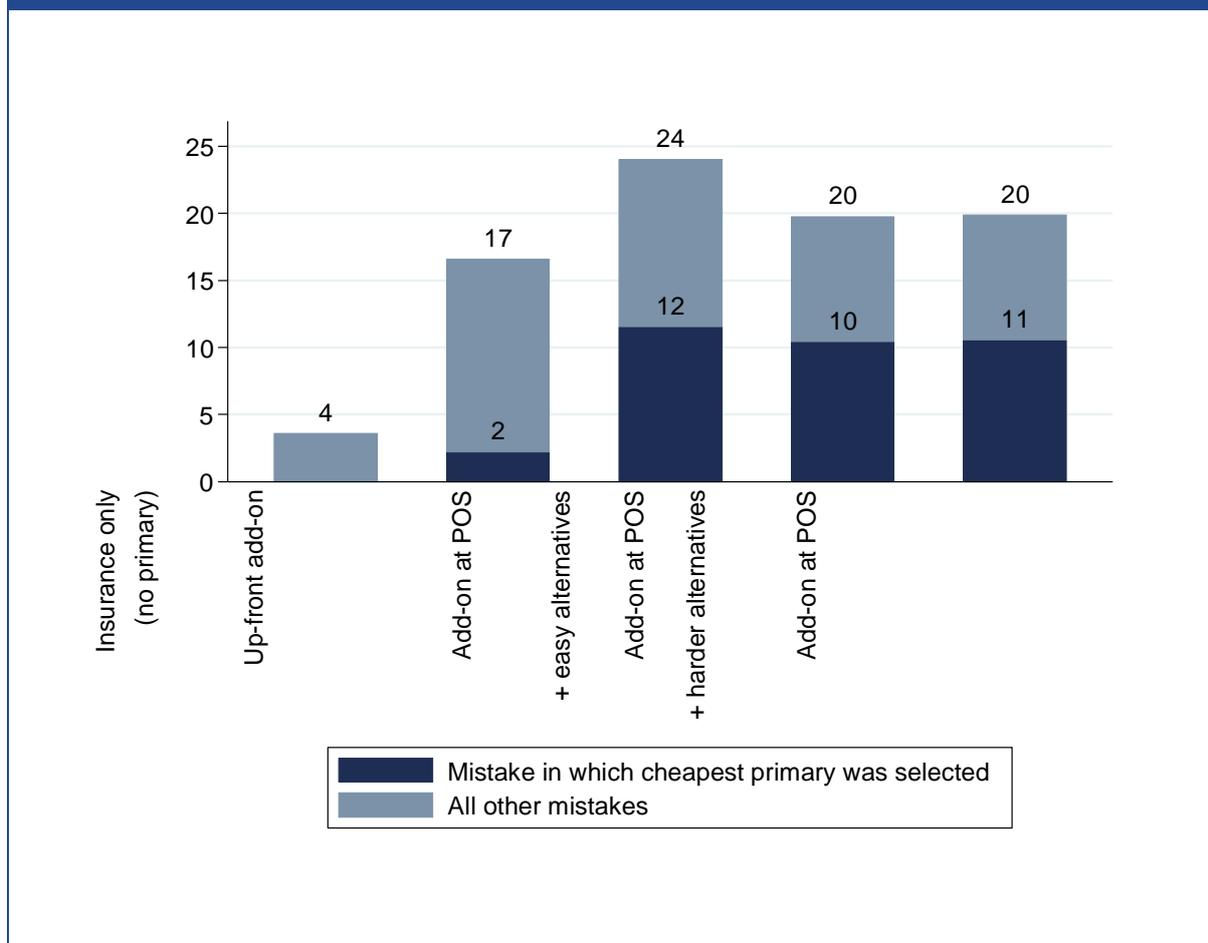
treatment, 24% of participants made a mistake, whereas in the 'Up-front add-on' treatment this measure was 17%.⁴⁰ As can also be seen from Figure 20, the proportion of respondents making a mistake decreased once respondents were given the option to search for alternatives at the POS. 20% of respondents did not choose the best deal in 'Add-on at the POS + easy alternatives' and 'Add-on at the POS + harder alternatives' treatments. However this difference is not statistically significant.

Figure 20 additionally divides the error rate between those that chose the cheapest primary product and those that did not. This figure illustrates that errors due to purchasing the cheapest primary in the 'Up-front add-on' treatment were 10 percentage points greater than in the 'Up-front add-on treatment'. This suggests that the introduction of dripping the insurance offer at the POS prevented a large proportion of people from finding the best primary product plus insurance bundle available to them, potentially because the respondents' choice of provider was dominated by the price of the primary product alone. This result is both economically and statistically significant.⁴¹

⁴⁰ Statistically significant at 1% level.

⁴¹ Statistically significant at 1% level and robust to inclusion of socio-demographic control variables. Significant at the 10% level once controlling for the number of insurance offers seen.

Figure 20: Proportion of participants that made a mistake by choosing the cheapest primary product (Error 1)



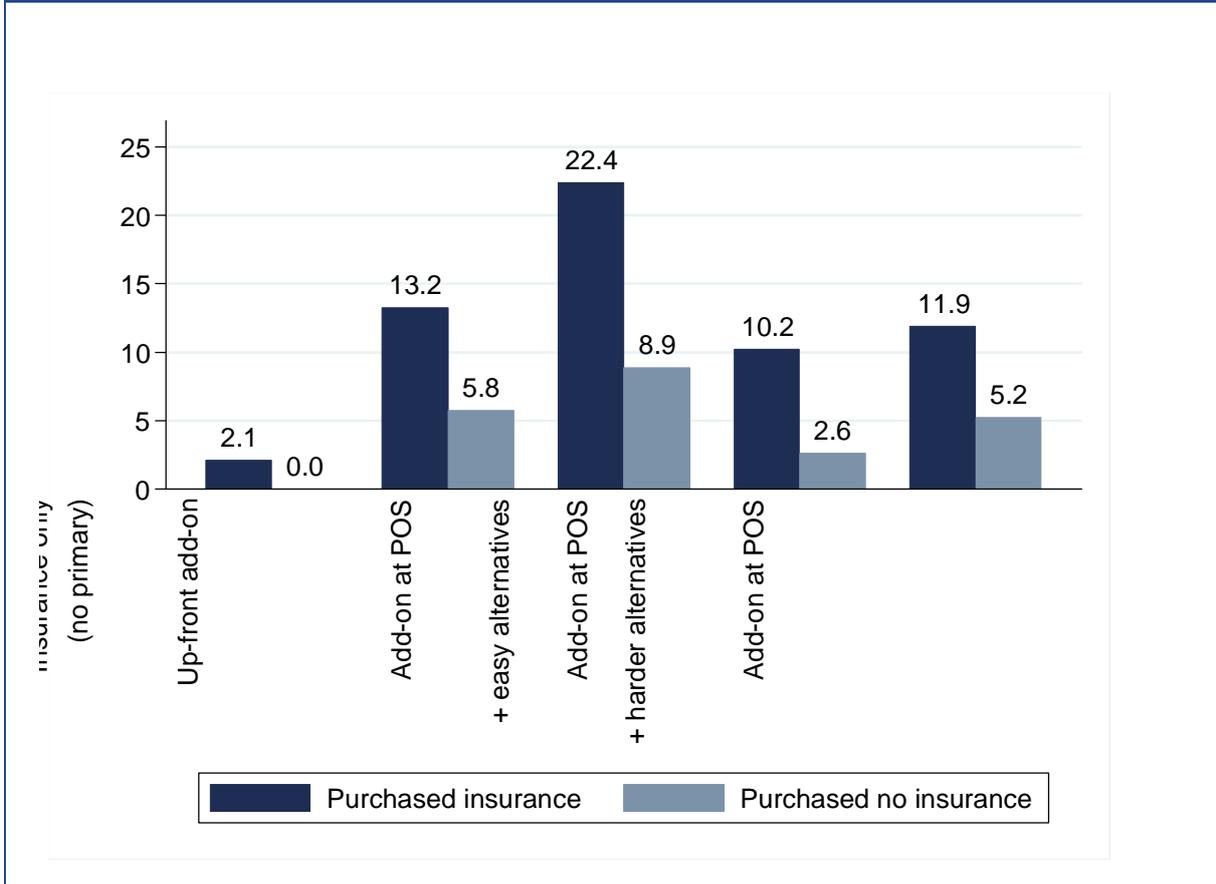
Note. The percentages shown above each bar are the proportion of respondents that made a mistake overall in each of the treatments. The figures shown above the dark blue portion of the bars are proportion of respondents that made a mistake by purchasing the cheapest primary product

We find that participants in the ‘Up-front add-on treatment’ lost on average just under 10 experimental currency units more than in the ‘Insurance only treatment’. In the ‘Add-on at the POS’ treatment respondents lost on average 7 units more of the experiment currency than those in the ‘Up-front’ treatment.⁴² The fact that the insurance offer was delayed to the POS was the only difference between these two treatments, hence the large difference between the two treatments shows the negative impact that delaying the insurance offer to the POS can have on consumer welfare.

⁴² Statistically significant at 1% level and robust to the inclusion of socio-demographic control variables. Significant at the 5% level when also controlling for the number of insurance offers seen.

Dividing up the losses between those who purchased insurance and those who did not, we find that there is a 9 unit difference in the loss for those who purchased insurance between the two treatments with add-ons, which is both economically and statistically significant (see Figure 21).⁴³

Figure 21: Average amount of money lost due to not purchasing the cheapest option seen, by purchased insurance or not



Note: Average loss across all participants in the experiment.

3.4.2 Error and loss measure 2

Error measure 2 is calculated as the proportion of respondents that did not choose the best deal out of all deals they actually chose to view. The associated loss measure is the earnings the respondents lost in the experiment because they made error 2. Loss and error measure 2 helps assess what proportion of errors (and losses) are driven purely by failure to use the information actually viewed to identify the best deal, due to computational complexity or inattention. As

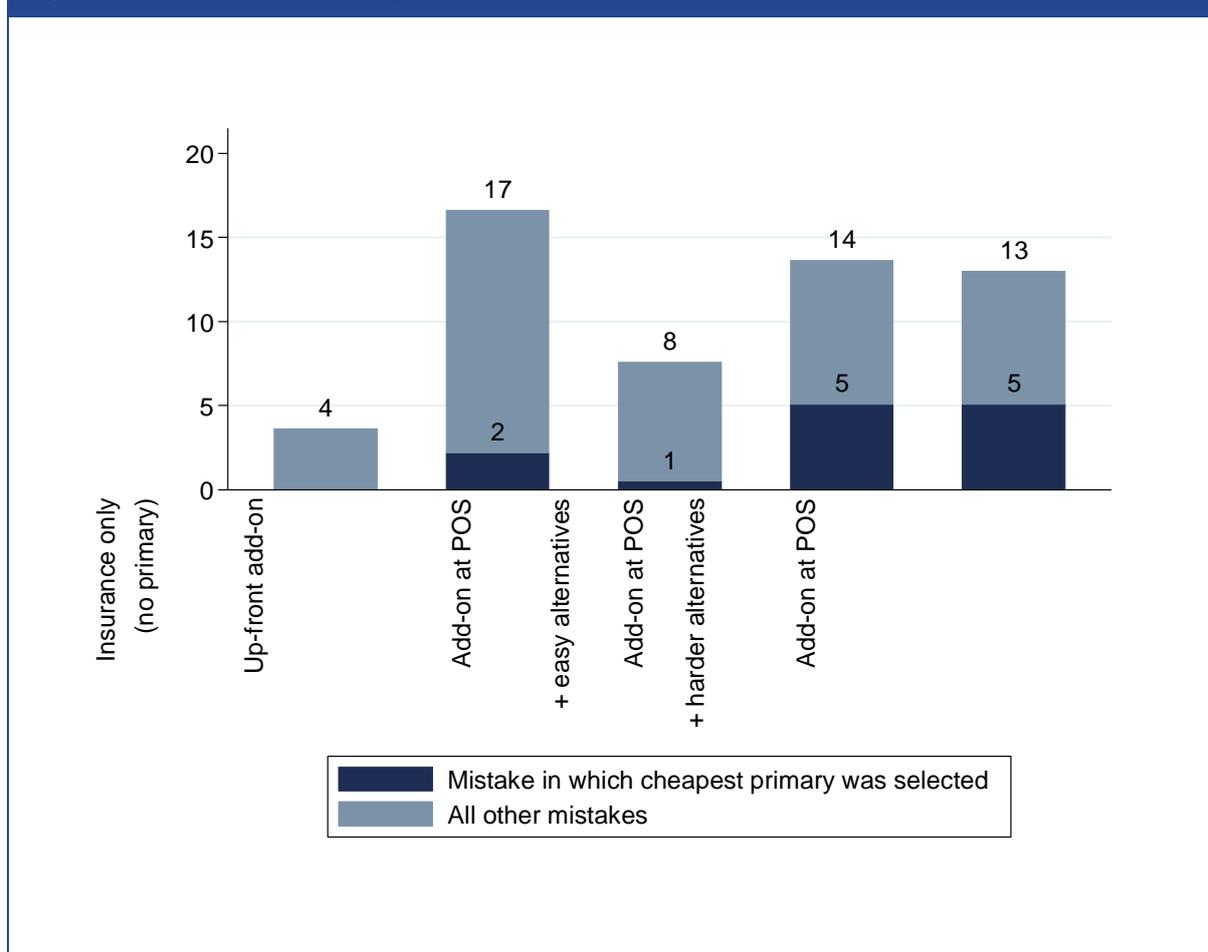
⁴³ Statistically significant at 1% level and robust to the inclusion of socio-demographic variables and the number of insurance offers seen.

previously mentioned, the two loss measures are the same for the first two treatments as there is no drip pricing.

When only considering offers *viewed* by respondents, the error rate and average loss is significantly lower when the insurance offer is delayed to the POS.

We find that the error rate in the 'Up-front add-on' treatment is 9 percentage points higher than the error rate in the 'Add-on at the POS' treatment and this difference is statistically significant at the 1% level.

Figure 22: Proportion of participants that made a mistake (loss 2)



Note. The percentages shown above each bar are the proportion of respondents that made a mistake overall in each of the treatments. The figures shown above the dark blue portion of the bars are proportion of respondents that made a mistake by purchasing the cheapest primary product

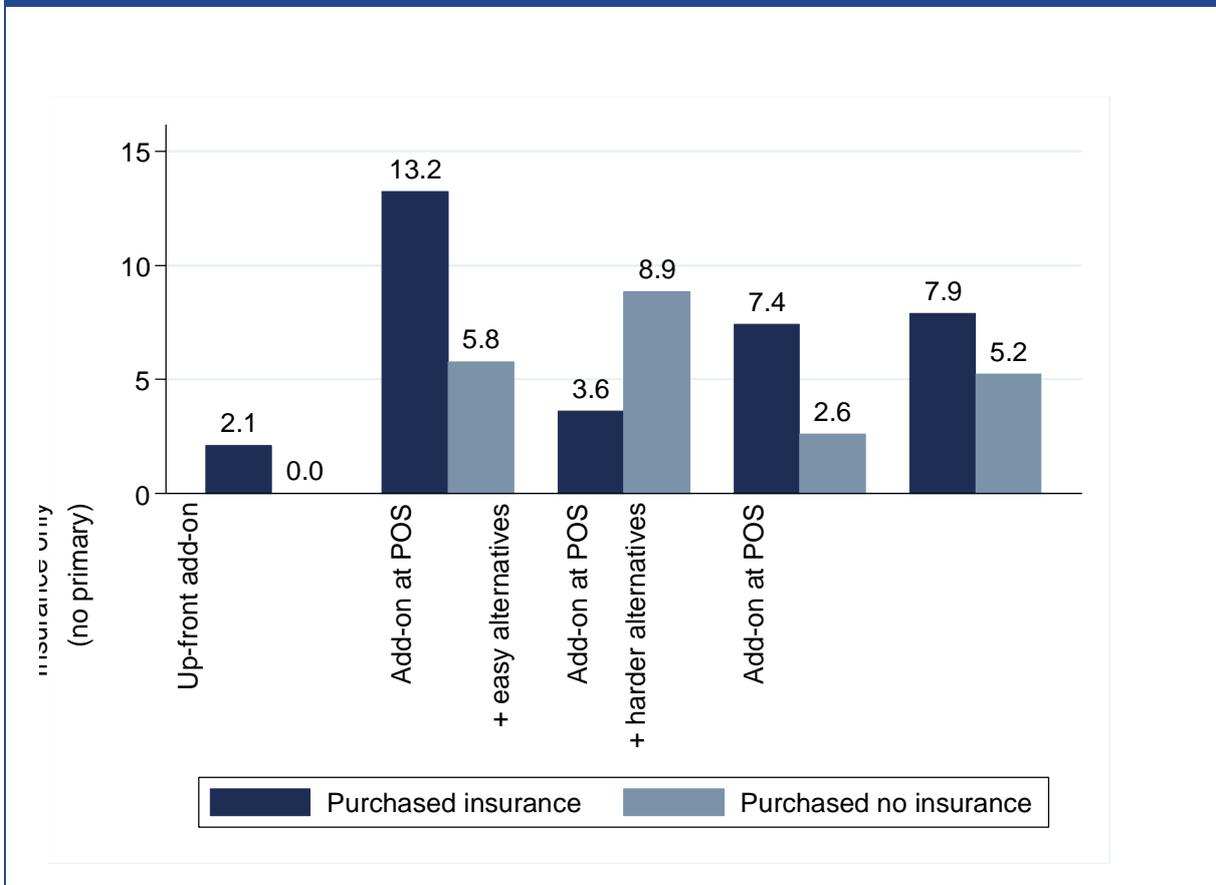
Similarly, delaying the add-on insurance offer to the POS led to a fall in the average loss 2 made by participants. In the 'Up-front add-on' treatment the average loss per participant was 11 units of the experiment currency, whereas in the 'Add-on at the POS' treatment the average loss was 5

units.⁴⁴ The effect of delaying the add-on insurance offer on loss 2 is therefore directly opposite in direction to the effect it had on loss 1 considered previously.

This result is likely to stem from the fact that in the ‘Add-on at the POS’ treatment participants did not choose to reveal the price of each of the add-on insurance offers, even though it was costless to do so. This behaviour meant that they often chose the cheapest insurance offer that they viewed, but this was because they only viewed one offer. Therefore, it is likely that they could have found a cheaper insurance offer if they had chosen to reveal all add-on insurance offers for the respective primary product offers.

The ‘Add-on at the POS’ treatment is the only treatment in which those who did not purchase insurance experienced greater losses, on average, than those who purchased insurance. Overall across all treatments those people who purchased insurance experienced greater average losses, in terms of this measure.

Figure 23: Average amount of money lost due to not purchasing the cheapest option viewed, by purchased insurance or not



Note: Average loss across all participants in the experiment.

⁴⁴ Statistically significant as 1% level and robust to the inclusion of socio-demographic control variables.

3.5 Outcomes for sellers

This section analyses to what extent insurance providers' profits were affected by the various design treatments. In the experiment insurance providers did not have any ability to react to the behaviour of customers; providers were static agents who only provided the same offer regardless of search behaviour or take-up of insurance under each framing.

In a real world market place insurance providers would be able to react to the behaviour of consumers and would be able to maximise their profits subject to this behaviour. For example, add-on insurance providers may decide to cross-subsidise between the insurance and the primary product. In the case that consumers place more emphasis on the cost of the primary product, it would be possible for providers to artificially lower the cost of the primary product at the expense of the add-on insurance. However, if there is fiercer competition in the market for add-on insurance than in the market for primary goods, the opposite may happen and providers might sell the primary product for a higher rate, in order to be able to sell the add-on insurance product at a cheaper rate than the competition.

The analysis here abstracts from these dynamics and only analyses *given the same pricing structure* if any of these insurance frames led to higher expected profits for providers of insurance.

Expected profits are calculated as the difference between revenue from insurance sales (price times quantity sold) minus the expected payouts (probability of an adverse event occurring times the cost of an adverse event to the provider). As each person in the experiment selected insurance at a potentially different price, revenue is calculated as the average of all insurance policies sold times the fraction of respondents purchasing insurance.

Care must be taken when comparing expected profits between treatments in which respondents selected 1 out of 11 and 1 out of 22 insurance offers. The final two treatments ('Add-on at the POS + alternatives') gave respondents twice as many options and as a result 'competition' in the market for insurance was stronger in these treatments.

Bearing these caveats in mind, we identify the following effects:

- 1) Delaying the offer of add-on insurance to the POS significantly increased profits to insurance providers.
- 2) Providing an option to search for alternative insurance offers reduced average profits made through the sale of insurance policies.
- 3) Making the alternative insurance offers easier to access further reduced profits to insurance providers

In the 'Insurance only' treatment average profits of 21 units of the experimental currency were made per person allocated to the treatment. The level of average profits was higher in 'Up-front add-on' and 'Add-on at the POS'.

The first key finding is that by delaying the insurance add-on offer to the POS, insurance companies earned much larger profits in the experiment. This can be seen by comparing profits in the 'Up-front add-on' treatment and the 'Add-on at the POS' treatment. In the former, the average amount of profit earned was 35 units of the experimental currency per person insured while in the latter it was much higher, at 42 units. This finding is both statistically and economically significant.⁴⁵

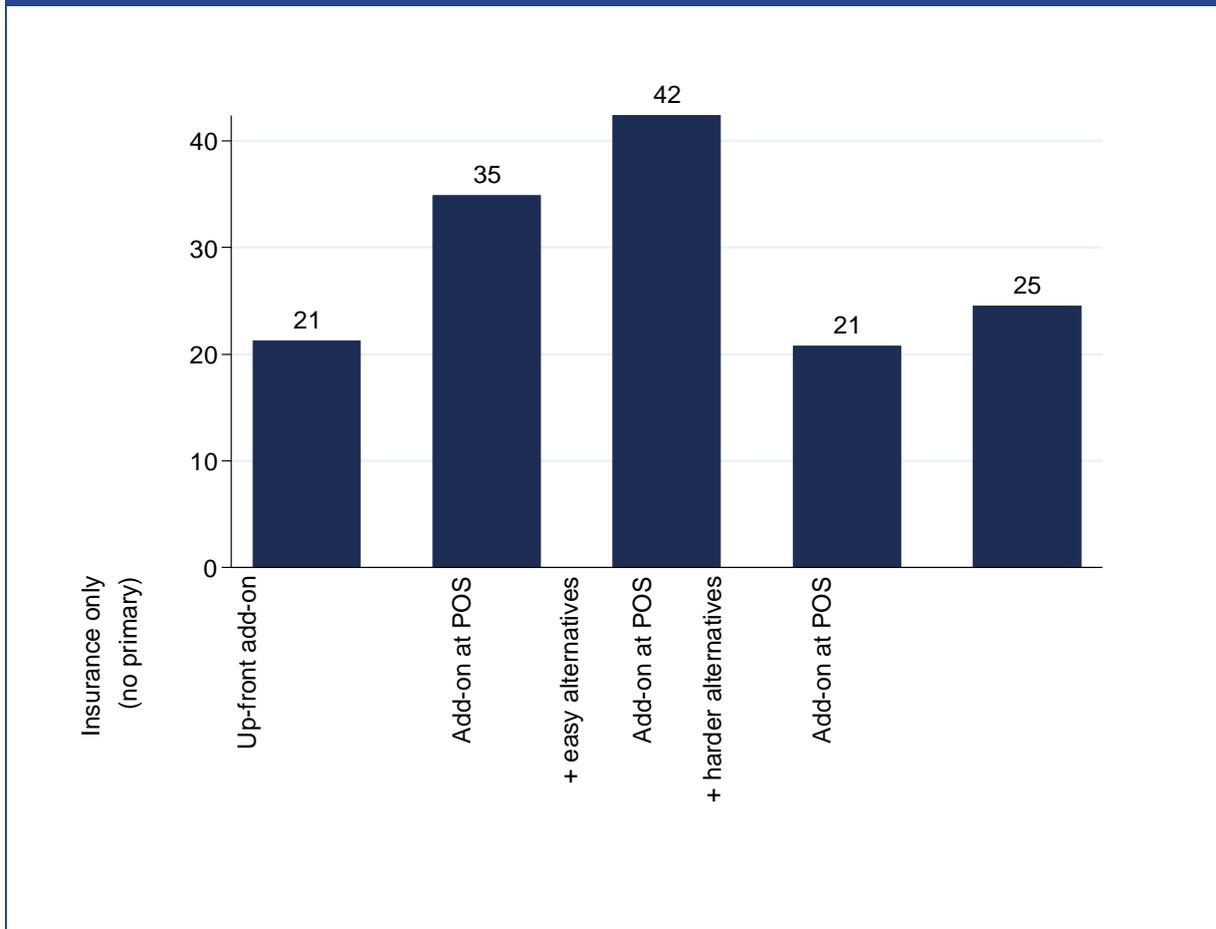
The second finding, that providing an option to search for alternative insurance offers reduced profits, can be seen by noting that in the two 'Add-on at the POS + alternatives' treatments the level of average profits per person taking part in these treatments was lower than in the other three treatments. As outlined previously, it is likely that this is the result of the fact that people in these two treatments were able to search for twice as many insurance offers as in the other three treatments. This meant that they could compare more offers and hence had more chance of finding cheaper insurance. In addition, errors and losses were lower in these two treatments, as respondents were more likely to select the best deal available to them when alternative stand-alone insurance offers were provided.

Finally, the third finding that making it easier to search for alternative offers reduced profits further, can be seen by comparing profits in the two 'Add-on at the POS + alternatives' treatments. Making it only slightly harder to search for alternatives led to a 6 unit increase in the average profit per insured person. This finding is also both economically and statistically significant.⁴⁶

⁴⁵ Statistically significant at 1% level and significant to the inclusion of socio demographic control variables.

⁴⁶ Statistically significant at 1% level and significant to the inclusion of socio demographic control variables.

Figure 24: Average amount of profit made by insurance companies, by treatment



3.6 Analysis of the differences between monthly and yearly framing of insurance offers

In addition to testing the five treatments discussed previously, the experiment also randomised whether respondents saw prices for insurance framed as yearly or monthly costs.

For example, respondents could either see the insurance offer displayed as “£120 per year” or as “£10 per month”. If prices were displayed in the monthly format, the total (yearly) cost was calculated for them as soon as they placed an insurance offer in the virtual shopping basket. Respondents were also clearly told in the instructions before starting the experiment that they were buying annual or monthly insurance.

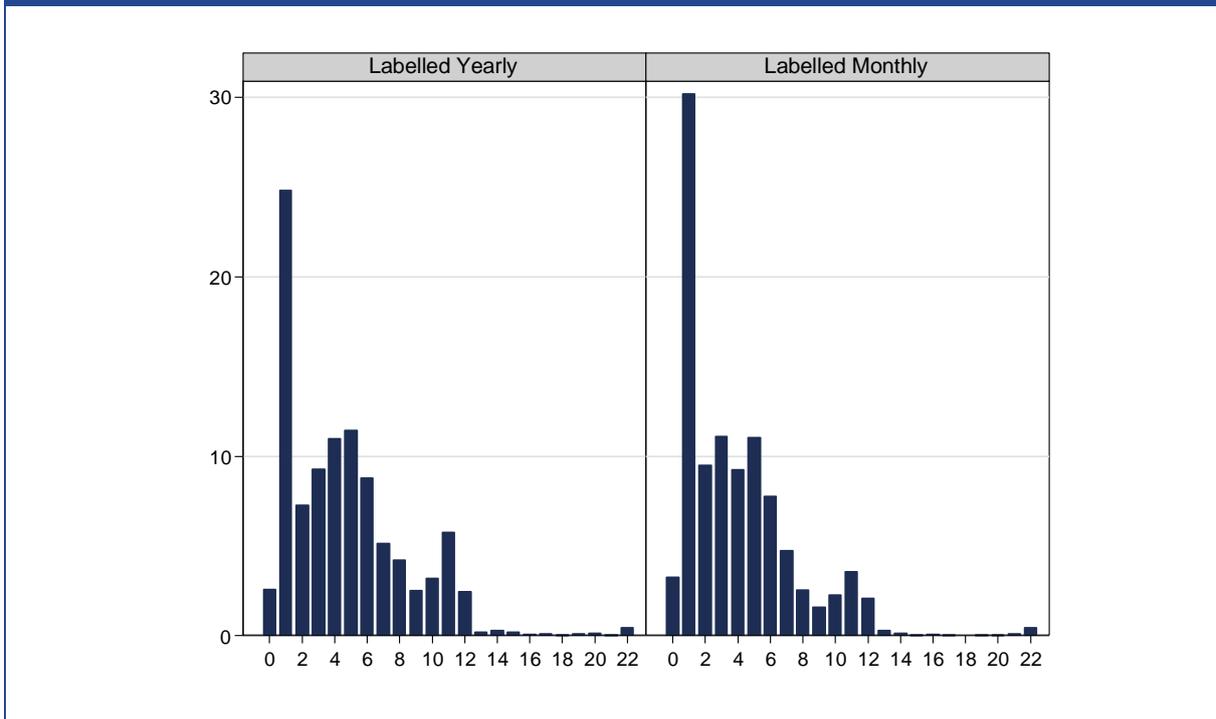
The label change therefore was very minor in nature as respondents could immediately see the final price as soon as they had put the offer in their shopping basket. Nonetheless, we find the following effects due to monthly as opposed to yearly labelling of offers:

- 1) Fewer insurance offers were viewed by respondents under the monthly framing.
- 2) A larger proportion of respondents in the monthly framing chose to view only one insurance offer.
- 3) The likelihood of buying the first insurance offer viewed was higher under monthly framing.
- 4) The average price at which insurance was sold was higher under monthly framing.
- 5) Average loss was higher under the monthly framing than it was under the yearly framing.
- 6) Respondents that viewed insurance prices quoted in monthly terms were frequently surprised and changed their mind about purchasing a policy when the price was converted to yearly. For example, 30% of respondents in the 'Up-front add-on' treatment removed the primary plus insurance from their shopping basket when they were informed of the annual insurance cost.

The take-up rate of insurance did not vary systematically between those respondents who saw insurance labelled as 'monthly' or 'yearly', yet the search behaviour did. As can be seen in Figure 25, a larger proportion of respondents who saw insurance offered at 'monthly prices' viewed only one insurance offer. The average number of insurance offers viewed in the yearly framing was 4.7, while it was 3.9 in the monthly treatment.⁴⁷

⁴⁷ Statistically significant at the 1% level and robust to the inclusion of socio-demographic control variables.

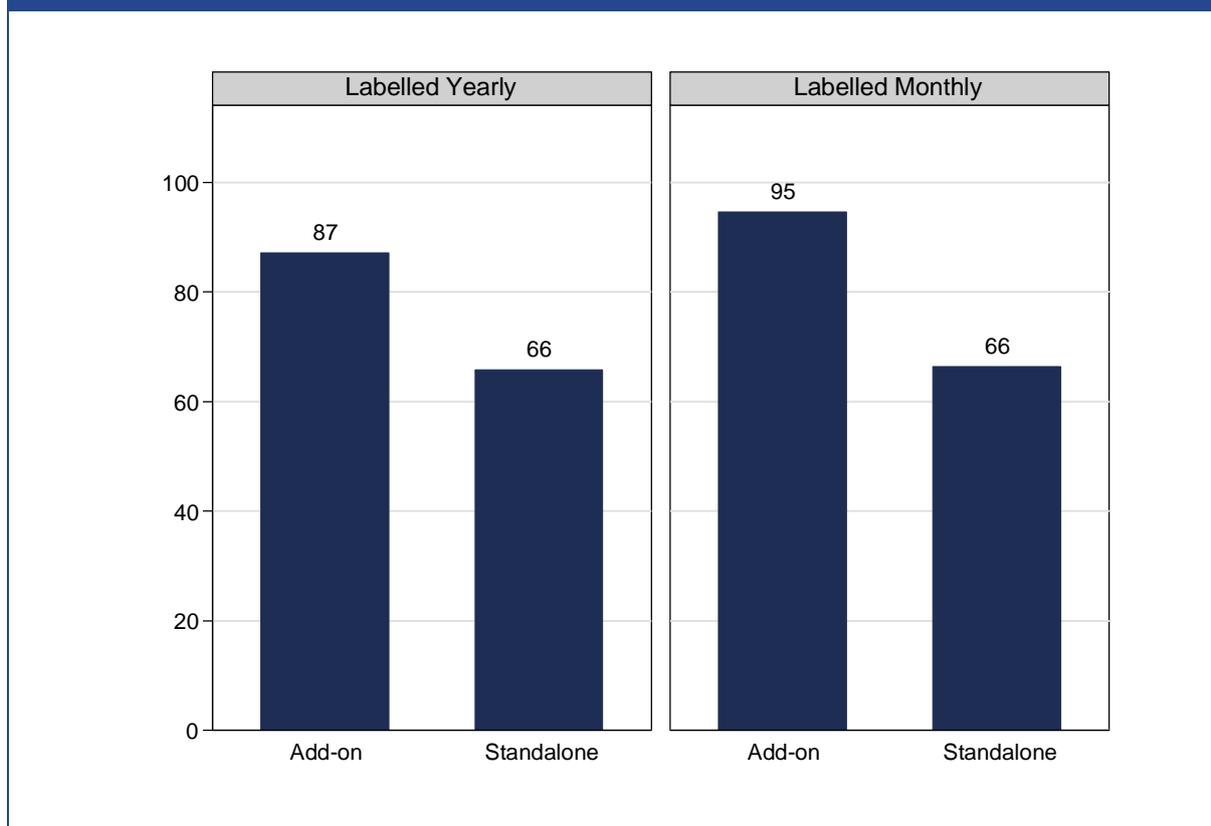
Figure 25: Insurance offers viewed, by labelled or monthly framing of the insurance offer



The fact that respondents viewed fewer insurance offers also had the consequence that the average price paid was higher under the monthly framing than it was under the yearly price framing. The average price paid for insurance when it was framed as a yearly cost was 76 units of the experimental currency, as opposed to 81 units when it was framed as a monthly cost.⁴⁸

As can be seen in Figure 26 below, this was entirely driven by a higher cost paid for add-on insurance. For standalone insurance, no price difference was observed when the framing was monthly or yearly.

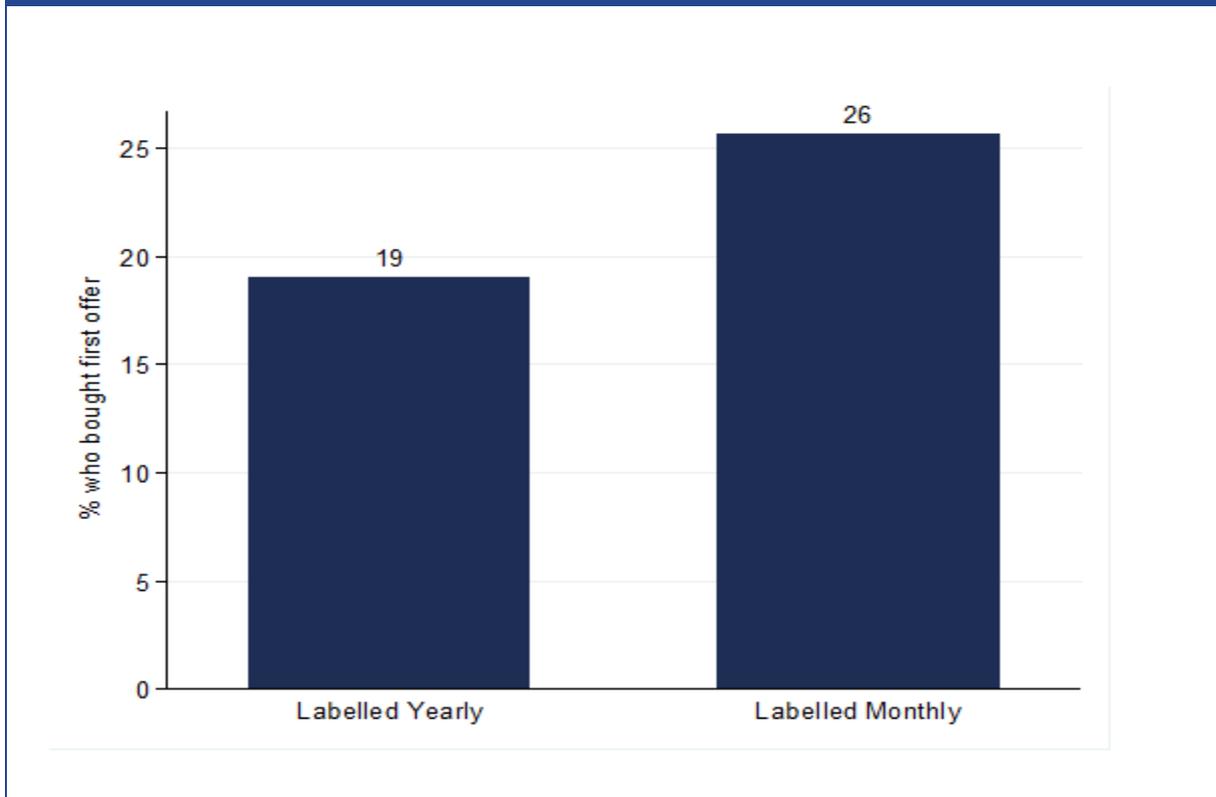
⁴⁸ Statistically significant at the 1% level and robust to the inclusion of socio-demographic control variables.

Figure 26: The effect of labelling insurance as monthly or yearly on the price paid for insurance.

Respondents in the monthly frame also tended to purchase the first insurance offer viewed, 26% as compared to 19% (Figure 27).⁴⁹

⁴⁹ This difference is statistically significant at 1%.

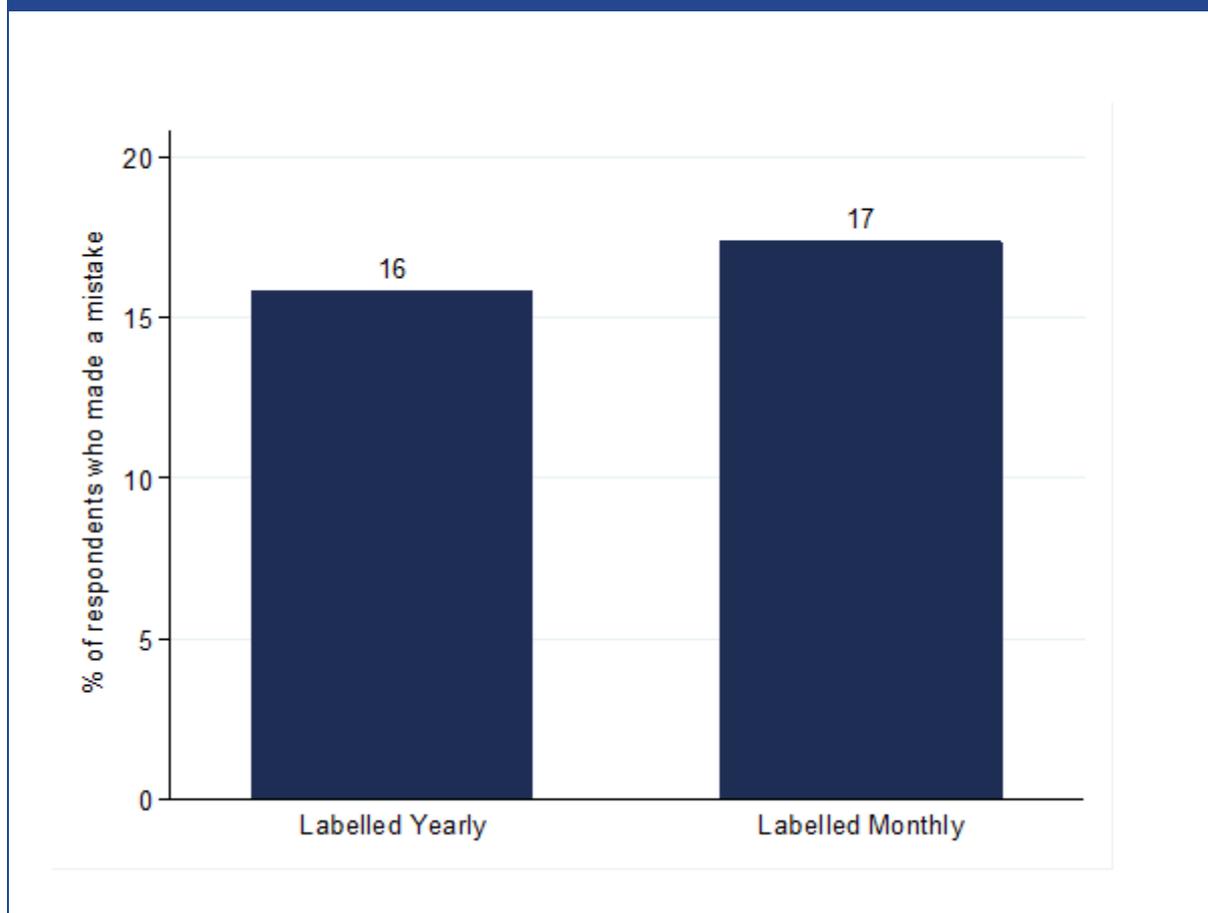
Figure 27: Proportion that bought the first insurance offer viewed, yearly versus monthly framing



The proportion of respondents that made an error by not selecting the best available deal was slightly higher under monthly framing, as shown in Figure 28. We also find that respondents made higher losses on average when the price was framed monthly. The difference in average loss between the respondents in the monthly and yearly framing was nearly 4 experimental units.⁵⁰

⁵⁰ Statistically significant at the 1% level. Statistically significant at the 5% level after inclusion of socio-demographic control variables.

Figure 28: Proportion of respondents who made a mistake, yearly versus monthly framing



3.6.1 Surprise caused by monthly framing

The way the monthly price framing was designed meant respondents were immediately informed of the yearly price as soon as they put the insurance policy into their shopping basket. A consequence of this was that the effects found above are likely to be an underestimation of the effects of monthly price framing in the real world, where the yearly price may not be provided clearly before the final decision to make the purchase is made.

In order to get a better sense to what extent the immediate conversion to yearly prices helped respondents in this experiment, we examine what percentage of respondents changed their mind once they placed an insurance policy in their shopping basket.

Table 3 below summarises the percentage of respondents who removed the standalone insurance policy from their shopping basket after first having added it. In all treatments, the proportion of respondents who changed their mind was significantly higher under the monthly framing than it was under the yearly framing. The same is true for respondents who placed the combination (primary product + add-on insurance) into the shopping cart, as can be seen in Table 4.

This confirms that the adverse effects of monthly framing identified previously are likely to be an underestimation of the effects of monthly framing in the real world where prices are not always immediately converted to the equivalent yearly cost. It also demonstrates that a significant proportion of respondents in the monthly framing made choices they considered to be sub-optimal when given better (annual) information about costs suggesting that monthly framing led them to under-estimate the costs of insurance ex-ante.

Table 3: Percentage of respondents who changed their mind after placing a standalone insurance policy into their shopping basket, by framing

	Yearly framing	Monthly framing
Insurance only	1%	7%
Add-on at the POS + easy alternatives	6%	16%
Add-on at the POS + harder alternatives	10%	17%

Table 4: Percentage of respondents who changed their mind after placing a combination (primary product + add-on insurance) into their shopping basket, by framing

	Yearly framing	Monthly framing
Up-front add-on	5%	30%
Add-on at the POS	10%	33%
Add-on at the POS + easy alternatives	8%	17%
Add-on at the POS + harder alternatives	9%	16%

3.7 Product level

In this section, the results of the experiment will be analysed at product level. That is, we will identify any differences in participant behaviour that emerged across the five different products. Table 5 shows the product features.

Product	Primary price	Probability of adverse event occurring	Cost in case of adverse event	Actuarially fair price for insurance
Home boiler	£895	4 out of 100 buyers	£370	£14.80
Tablet computer	£479	15 out of 100 buyers	£450	£67.50
Laptop computer	£980	7 out of 100 buyers	£330	£23.10
Luxury holiday for two	£4000	2 out of 100 buyers	£3800	£76
12 day car hire in Spain	£190	5 out of 100 buyers	£500	£25

Note: Prices reported are prices the primary products started at. Prices in the experiment were uniformly distributed between the starting price and a 20% mark-up. The actuarially fair price is calculated as the cost of the adverse event to the respondent multiplied by the probability of the event occurring.

There are two reasons why respondents may have behaved differently when faced with different products:

- The parameters of each product (e.g. price of primary, price of insurance, etc.) may have led respondents to behave differently.
- Personal biases participants may have had towards different products and their perception that some products required insurance more than others.

As shown above, the primary products which were chosen differed in a number of parameters: price for primary, price for insurance, likelihood of adverse event occurring and cost of adverse event. All of these may have affected respondents' likelihood of purchasing insurance, the price they were willing to pay for it and all other outcome variables.

Secondly, participants could be influenced simply by the labels attached to the products themselves. For example, there could be habits associated with purchasing insurance for some products, while less so for other products. Or they may have had stronger emotional responses to certain types of loss events that increased the likelihood of them insuring against them.

In order to disentangle these two effects the experiment also included *unlabelled* versions of the products. That is, some respondents did not see the labels 'home boiler', 'tablet computer' etc,

but instead were told they were purchasing product 1, 2, 3 etc. The parameters, however, were unchanged. These respondents effectively purchased ‘home boilers’ and ‘tablet computers’ without knowing the nature of the product they were purchasing.

Decisions in the experiment for these respondents were therefore entirely based on the parameters of the products alone, without the confounding effects of the labels.

3.7.1 Search behaviour

The amount of search for insurance carried out across the different product categories was relatively similar. However, significantly fewer searches for insurance were carried out for home boiler insurance than any of the other products, which had a high price relative to the actuarially fair insurance price.⁵¹ Laptop insurance was the second least regularly searched for across all participants, which also had a high price relative to the fair insurance price.⁵² There was no statistically significant difference between the search behaviour of those faced with looking for insurance for a luxury holiday for 2 people or for 12 days car hire in Spain.⁵³ The most searched for type of insurance was tablet computer insurance, which had the lowest cost relative to the fair price of insurance.⁵⁴ This implies that when the primary product price was high relative to the fair insurance price, respondents tended to invest less search effort and this is also borne out in the tendency to purchase the first insurance offer seen for these products (Figure 31).

3.7.2 Take-up

We find two key outcomes regarding take-up:

- 1) Labelling products generally resulted in higher take-up of insurance.
- 2) Respondents were more likely to purchase insurance if the cost of the insurance was small relative to the cost of the primary product.

As can be seen in Figure 29, there were differences in the rate of take-up of insurance across the five products. The lowest take-up of insurance was for tablets and this is found to be statistically lower than for all other products.⁵⁵ The laptop was found to be the second least commonly insured primary product.

⁵¹ Statistically significant at 1%. level.

⁵² Statistically significant at 1%. level.

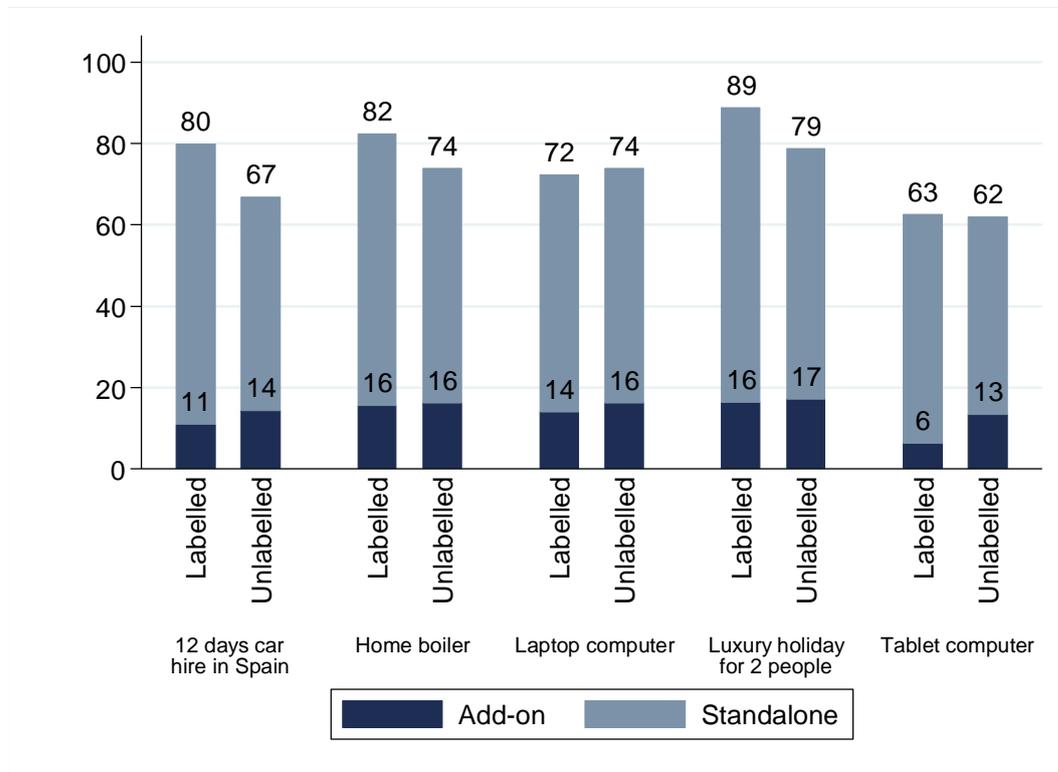
⁵³ Not statistically significant at 10% level.

⁵⁴ Statistically significant at 1%. level.

⁵⁵ Statistically significant at 1% level.

The most frequently insured product was the luxury holiday for two.⁵⁶ There was no significant difference in the take-up of insurance rates for the home boiler and the 12 days car hire in Spain.

Figure 29: Take-up of insurance, by product and labelled versus unlabelled frame



Note: Unlabelled products were only tested in two of the treatments, and therefore this figure only includes results from these treatments.

As can also be seen in Figure 29, participants were more likely to purchase insurance when they knew the nature of the product that they were choosing to insure. This may be because respondents were less likely to engage with losses on abstract products than the labelled products.

We find that for the luxury holiday, car hire and home boiler insurance there was a significant difference between the rates of take-up of insurance between the labelled and unlabelled products. Participants were 13.1% more likely to buy insurance when the product was labelled as being car hire⁵⁷; 9.9% more likely when labelled as being a luxury holiday⁵⁸; and 8.4% more likely

⁵⁶ Statistically significant at 1% level.

⁵⁷ Statistically significant at 1% level.

⁵⁸ Statistically significant at 1% level.

when labelled as a home boiler⁵⁹. For the other two products we did not find a statistically significant difference between the results for labelled and unlabelled products.

Whilst the removal of product labels generally led to lower take-up rates of insurance, it did not alter the relative take-up rates across products. This result suggests that the different product parameters, rather than the specific product names, drive the differences in take-up of insurance rates across products.

One hypothesis is that the relative cost of the insurance compared to the primary product matters. We therefore tested the impact of the ratio of the cost of the primary product to the fair price of insurance on the proportion of participants that bought insurance. We found that the more expensive the primary product was relative to the fair price of insurance, the more likely individuals were to purchase insurance.⁶⁰ Therefore showing that participants' take-up of insurance was strongly influenced by the relative price of insurance to the price of the primary product - or anchoring occurred.

When breaking down the take-up of insurance between add-on and standalone, we find that the only statistically significant difference between labelled and unlabelled add-on insurance take-up rates was for tablet computer insurance, where product labelling resulted in a 6.6% lower take-up of add-on insurance.⁶¹ However, the rates of take-up for standalone insurance were significantly higher for all labelled products than their unlabelled equivalents, apart from in the case of laptop insurance.⁶²

3.7.3 Bought first insurance offer

- 1) Labelling products reduced the tendency of respondents to buy the first insurance offer they viewed.
- 2) Participants were significantly more likely to purchase the first offer viewed the higher the cost of the primary good relative to the fair price of insurance.

Participants who purchased insurance were significantly more likely to purchase the first insurance offer they viewed when faced with home boiler insurance than any of the other products. A significantly lower proportion of participants bought the first insurance offer that they viewed for tablet computer insurance than for any of the other products.

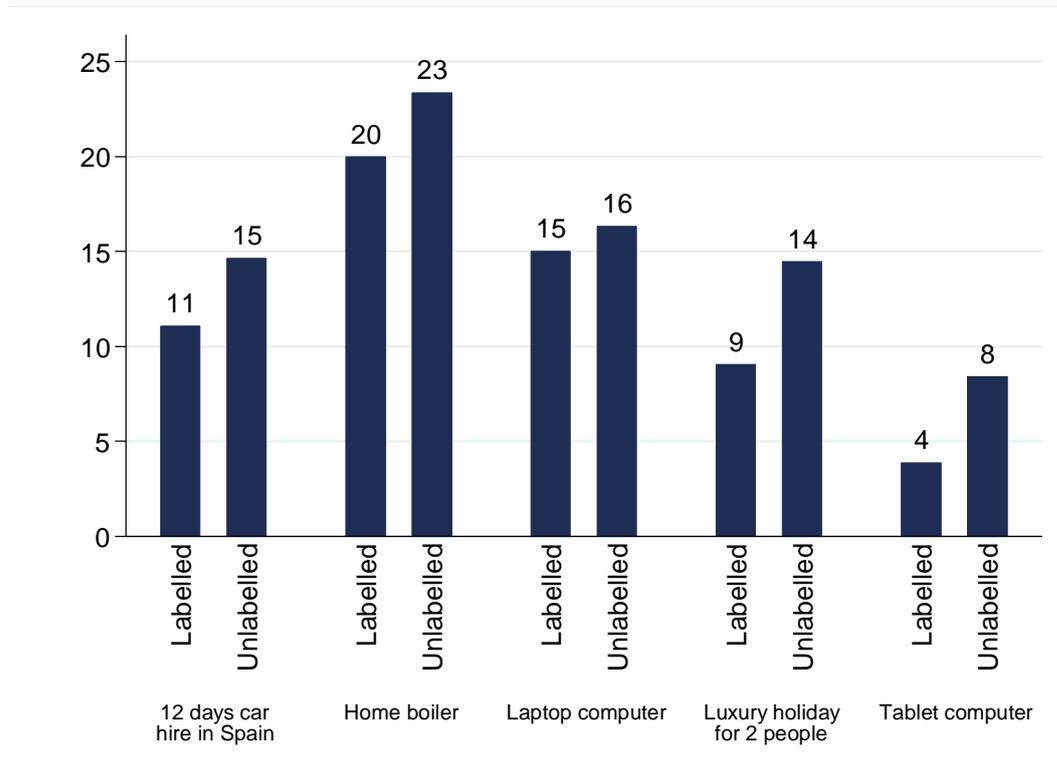
⁵⁹ Statistically significant at 2% level.

⁶⁰ Statistically significant at 1% level.

⁶¹ Statistically significant (s.s.) at 1% level.

⁶² Car hire – 16.6% (s.s. at 1% level); Home boiler – 9.0% (s.s. at 5% level); Laptop (not s.s. at 10% level); Holiday – 10.7% (s.s. at 1% level); Tablet – 7.7% (s.s. at 5% level)

Figure 30: People who bought the first insurance offer they viewed



Note: Unlabelled products were only tested in two of the treatments, and therefore this figure only includes results from these treatments.

When we consider the impact of product labelling on the proportion of people who bought the first insurance offer that they viewed, we find that for each product a higher proportion of participants purchased the first offer when products were unlabelled than when they were labelled. However, the difference in the proportion of participants that bought their first insurance offer viewed was only statistically significant in the cases of the luxury holiday and the tablet computer.⁶³ This shows that product labels meant participants were more likely to carry out at least some searching for insurance offers.

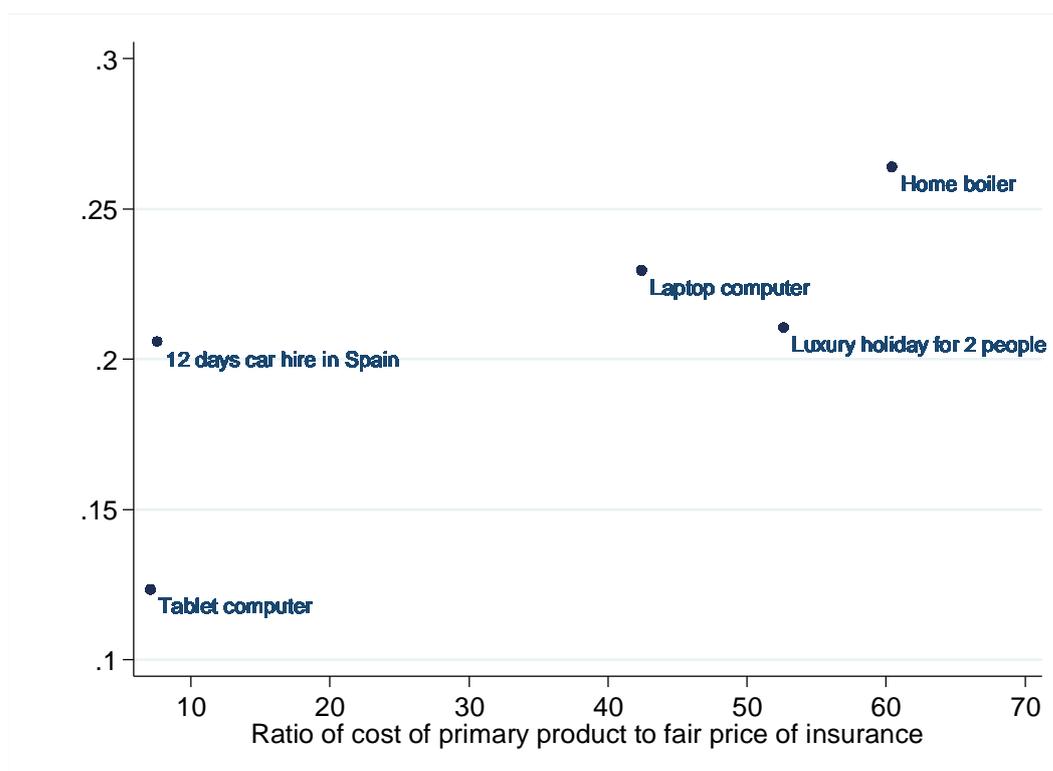
Regression analysis of the ratio of the minimum cost of the primary product to the fair price of insurance on the proportion of participants that purchased the first insurance offer viewed, finds that participants were significantly more likely to purchase the first offer viewed the higher the cost of the primary good relative to the fair price of insurance.⁶⁴ This is further evidence of anchoring and can be seen in Figure 31. For the home boiler, the laptop computer and the luxury

⁶³ Both statistically significant at 10% level.

⁶⁴ Statistically significant at 1% level.

holiday, the primary product is significantly more expensive than the actuarially fair price of insurance, and we find that the proportion of respondents that purchased the first offer viewed was relatively high. Tablet computer and 12 day car hire in Spain on the contrary, are cheap products relative to the actuarially fair price of insurance and conversely, a smaller fraction of respondents purchased the first offer viewed.

Figure 31: Impact of the relative cost of the primary product as compared to the cost of the add-on insurance on the proportion of respondents buying the first offer seen



3.7.4 Price

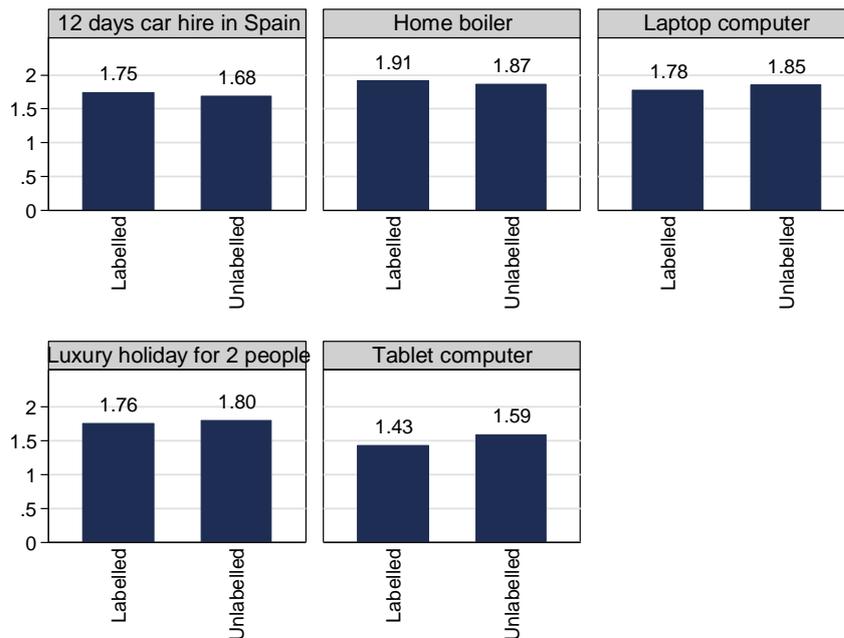
In order to be able to compare price paid for insurance across products, the price was normalised as a fraction of the cost of fair insurance. A price of '2' therefore represents paying twice the actuarially fair price.

As can be seen in Figure 32 below, for both add-on and standalone insurance the cheapest average price paid for insurance, relative to the fair price, was found to occur for tablet computer

insurance. The average price paid in terms of the fair price was significantly lower than all of the other products.⁶⁵

- 1) The average price paid for insurance was higher if the relative cost of the insurance to the cost of the primary product was low.
- 2) The effect of labelling the products on the price paid for insurance depended on the product label used.

Figure 32: Average insurance price – relative to the fair insurance price



Note: Unlabelled products were only tested in two of the treatments, and therefore this figure only includes results from these treatments.

The highest average price paid relative to the fair insurance price was for the home boiler insurance. The average price paid for both add-on and standalone insurance was significantly higher for this product than for all other products. The only exception was the average price paid for add-on insurance for the luxury holiday for two. The home boiler and the luxury holiday for two had the highest primary product price to fair insurance price ratio. This is in line with the previous findings that search effort tended to be lower; and, tendency to purchase the first product viewed was greater for products that had a higher primary price to fair insurance price ratio. This further supports the theory that anchoring occurred for these types of products.

⁶⁵ Statistically significant at 1% level.

When comparing the average price paid for insurance across all five products depending on whether the products were labelled or not, no clear pattern emerges. For some products, the average price was higher for labelled products than unlabelled, whereas the reverse was true for other products. This result may be due to the fact that participants carried out more searches for labelled products, so may have found cheaper insurance. However, they may have been more inclined to purchase insurance for labelled products at higher prices than they would have for unlabelled products. Therefore the effect of labelling on the price paid for insurance appears to depend on the type of product label.

3.7.5 Error rate

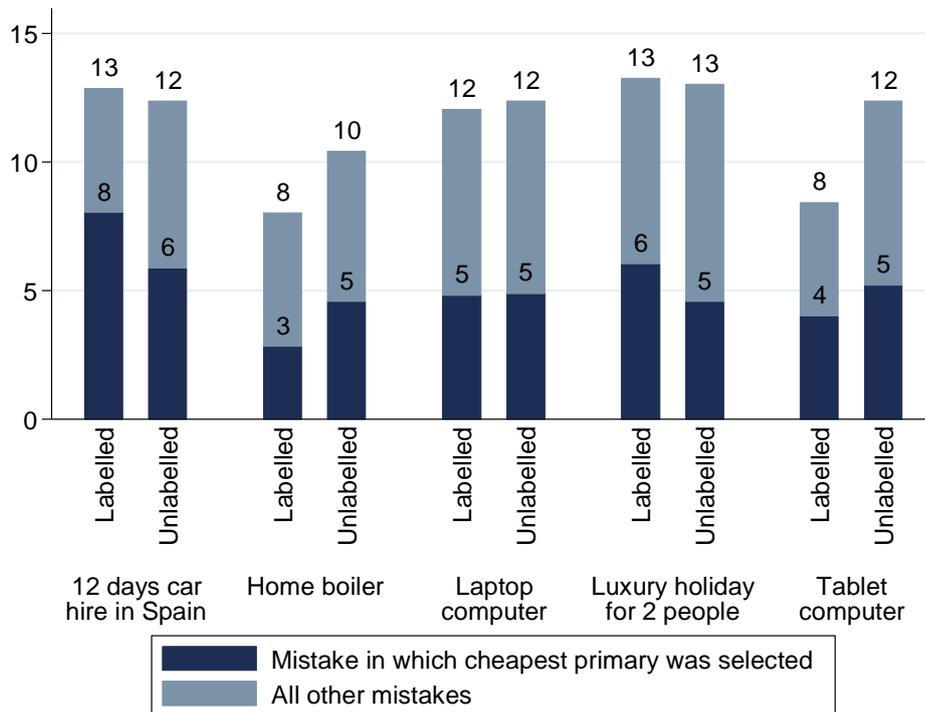
When we consider the error rate across the different products, we see that the highest error rates occurred for the 12 days car hire in Spain and the luxury holiday for two people, where 18% and 17%, respectively, made a mistake.⁶⁶ The error rates for the other three products were either 14% or 15%.

Figure 33 below looks only at respondents in the treatments ‘Add-on at the POS + harder alternatives’ and ‘Insurance only’ as these were the only treatments in which some respondents saw unlabelled versions of the same products. We see that removing the label generally makes it somewhat more complicated for respondents, particularly in the case of the home boiler and the tablet computer for both of which the rate of errors increased when the label was removed.

It can also be seen that for unlabelled products the difference in the error rate was smaller, ranging from 13% to 10% while it ranged from 8% to 13% in the labelled setting. However, these differences are not statistically significant.

⁶⁶ Error rate of car hire is statistically significantly higher than all other products except for the luxury holiday; Luxury holiday error rate is significantly higher than the error rate of the home boiler and laptop.

Figure 33: Fraction of participants who chose the cheapest primary but made a mistake (error 1)



4 The effects of socio-demographic characteristics

So far the analysis has focused entirely on the effects the treatments had on the choices made in the experiment. However, many other characteristics are likely to affect why respondents decided to take out insurance, how much search they undertook and how many mistakes they made in the process of selecting the cheapest insurance offer.

This section will analyse which individual characteristics (such as age, income, gender or risk preferences for example) affect the main outcomes of interest. In addition, it will also study to what extent certain treatments affect different respondents differently. For example, it is not clear that delaying the insurance offer to the POS will affect respondents of all education levels equally, or the young as much as the old.

In order to test whether or not there are any significant correlations between the actions in the experiment and socio-demographic variables we ran linear regressions of various outcome variables on the socio-demographic variables available to us.

Table 6 below summarises the linear regression results. The stars indicate the significance level of the estimate. *** imply that this estimate is statistically different from zero at the 1% confidence level, ** indicate that it is at the 5% level and * indicate a confidence level of 10%.

An example of how the table can be read is as follows: in regression (5) the outcome variable is the loss measure (1). The coefficient of 0.17*** on the variable “age” indicates that a respondent who is one year older than the average⁶⁷ has a loss 1 which is 0.17 experimental currency units higher than the average loss 1. The three stars indicate that the likelihood that this coefficient is zero is less than 1 percent.

The following sections will discuss each of these individual level socio-demographic variables in turn.

⁶⁷ Average age in the sample was 52.

Table 6: Relationship between outcomes of the experiment and socio-demographic variables

	(1) Respondent purchased insurance	(2) Average price paid for insurance	(3) Number of insurance offers seen	(4) Respondent searched for alternative offers	(5) Loss 1	(6) Loss 2	(7) Error 1	(8) Error 2
Lower socio-demographic group dummy	0.01	-2.41	0.16	0.00	1.11	1.47	0.009	0.013
	(0.02)	(2.25)	(0.24)	(0.03)	(1.75)	(1.50)	(0.015)	(0.012)
Age	0.00*	0.17**	-0.02*	0.00	0.17***	0.10**	0.002***	0.001***
	(0.00)	(0.08)	(0.01)	(0.00)	(0.05)	(0.04)	(0.000)	(0.000)
Income	-0.00	0.04	-0.00	0.00	0.08	0.24*	0.002	0.002
	(0.00)	(0.28)	(0.03)	(0.00)	(0.18)	(0.13)	(0.002)	(0.001)
Age when finishing education	0.01	-0.41	0.05	0.03***	0.66	0.12	0.000	-0.001
	(0.01)	(0.78)	(0.08)	(0.01)	(0.55)	(0.46)	(0.005)	(0.004)
Male	-0.08***	3.08	-0.45**	-0.06***	0.26	-1.07	-0.025**	-0.025**
	(0.02)	(2.03)	(0.20)	(0.02)	(1.46)	(1.11)	(0.013)	(0.010)
Risk aversion	0.00	0.79	-0.06	-0.01	0.08	0.11	0.001	0.001
	(0.00)	(0.50)	(0.05)	(0.01)	(0.35)	(0.29)	(0.003)	(0.002)
Cognitive ability	-0.01	-4.87**	0.59***	0.01	-5.76***	-4.29***	-0.039***	-
	(0.02)	(1.92)	(0.20)	(0.02)	(1.30)	(1.04)	(0.012)	(0.010)
Financial literacy	-0.03*	-7.89***	0.47*	0.04	-2.52	-1.43	-0.034*	-0.035**
	(0.02)	(2.47)	(0.24)	(0.03)	(2.12)	(1.51)	(0.018)	(0.015)
Number of insurance products owned	0.01**	-1.30***	0.09*	0.01*	-0.20	-0.16	-0.000	0.001
	(0.00)	(0.47)	(0.05)	(0.01)	(0.36)	(0.30)	(0.004)	(0.003)
Constant	0.72***	84.87***	3.92***	0.58***	0.44	0.36	0.072*	0.054
	(0.07)	(7.50)	(0.76)	(0.09)	(5.80)	(4.74)	(0.043)	(0.037)
Observations	5,710	4,250	5,710	3,980	5,710	5,710	5,710	5,710

Note: Standard errors clustered at the subject level in parentheses. *** denotes significance at the 1% level, ** significance at the 5% level, and * significance at the 10% level.

4.1 Social class

There was no significant difference in the behaviour between socio-demographic groups across any of the outcome measures.

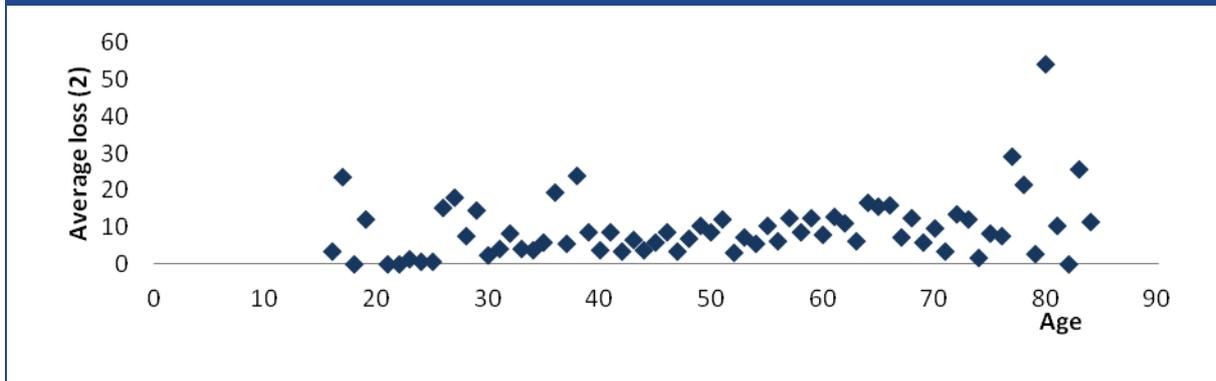
4.2 Age

As already noted in the introduction, older respondents appear to have made more errors and higher losses in the experiment. This is true for both error/loss measures. That is, older respondents were more likely to not pick the cheapest offer available to them or the cheapest offer they had seen, and these results are statistically significant at the 1% and the 5% level.

However, plotting age against loss in Figure 34, below, illustrates that this is potentially driven by respondents above the age of 80 making very large losses. While this is only a small proportion of the participants, it indicates that older consumers were more likely to make large losses in this setting.

In addition, there is no evidence that age matters more in some treatments than in others.

Figure 34: The correlation between age and loss in the experiment.



Older respondents also tend to pay more for their insurance (being one year older was associated with paying £0.17 of the experimental currency more per insurance product).

4.3 Income

Income did not correlate significantly with any outcome variable in the experiment. Loss (2) is slightly higher for respondents from a higher income bracket, but this result is only just significant at the 10% confidence level.

4.4 Education

As a measure of education level obtained, respondents were asked at what age they finished their education. This variable only correlates significantly with whether or not the respondent searched for any alternative insurance offers. However, the effect is small in magnitude.

4.5 Gender

Men were significantly less likely to purchase insurance (8% less likely), tended to view fewer insurance offers (on average, men saw 0.45 fewer insurance offers per item they purchased) and men were also 6% less likely to search for standalone alternative insurance.

Men tended to make fewer errors than women, both relative to the best offer seen and the best offer available, however the difference was small (2.5% fewer errors).

4.6 Risk aversion

Risk aversion was measured using a standard incentivised game. Risk-averse respondents will prefer a smaller pay-off with certainty rather than a larger payment with uncertainty. Lottery 1 below will be chosen by more risk-averse respondents and lottery 5 by more risk-loving respondents.

You now have the opportunity to play some games and win a few additional points.

In this game, we will flip a coin for you. You have a 50-50 chance of winning either a small amount or a large amount of points depending on whether the coin comes up heads or tails.

Please choose below which lottery you would like to play. Depending on which lottery you pick, there will be more or less risk!

	Coin comes up heads	Coin comes up tails
Lottery 1	You win 28 points	You win 28 points
Lottery 2	You win 20 points	You win 44 points
Lottery 3	You win 16 points	You win 52 points
Lottery 4	You win 12 points	You win 60 points
Lottery 5	You win 2 points	You win 70 points

We find no statistically significant effect on our outcome measures between respondents who are more or less risk-averse/-loving.

When we consider the distribution of responses we find that the majority of respondents were risk-averse with 35.7% and 23% choosing lottery 1 and 2, respectively.⁶⁸

4.7 Cognitive ability

Respondents' cognitive ability was tested with a short, incentivised question designed to test whether respondents can suppress an intuitive and spontaneous wrong answer in favour of a reflective and deliberative correct answer.

You buy a bat and a ball for £1.10. The bat costs £1 more than the ball. How much does the ball cost?

- 10 p
- 5 p

⁶⁸ 12.62% chose lottery 3, 12.69% lottery 4, and 15.98% lottery 5.

■ 90 p

The correct answer to this question was that the ball costs 5 pence and the bat £1.05.

Respondents who gave the correct answer (slightly over a third of all respondents) were no more likely to purchase insurance, but if they did, they paid significantly less for it (nearly 5 units of the experimental currency less). They were also likely to have viewed more insurance offers (0.6 more offers viewed on average) and they were also likely to have made significantly smaller losses and fewer errors.

We further investigated in which of the treatments respondents' cognitive ability was particularly important. This was done by including interaction terms between treatment dummies and the dummy variable which indicates that the respondent correctly answered the cognitive ability questions.

In Table 7, we investigate interactions between cognitive ability and the treatments. The coefficients in this table can be interpreted as follows: the coefficient on "Cognitive ability" * 'Up-front add-on' tells us whether those respondents who correctly answered the question were affected more or less by the treatment than those respondents who chose the incorrect answer.

The fact that this coefficient is not statistically significant implies that in the 'Up-front add-on' treatment, respondents with higher cognitive ability did not have a higher or lower loss than respondents with lower cognitive ability.

However, we do see that in all three treatments which involve a dripped or delayed add-on offer at the POS, respondents with lower levels of cognitive ability have significantly higher losses than those with higher levels of cognitive ability.

This is strong evidence that vulnerable consumers (measured by cognitive ability in this case) are likely to suffer more from dripped or delayed add-on insurance offers at the POS than less vulnerable consumers.

Table 7: The effect of cognitive ability in the different treatments

	Loss 1
'Up-front add-on' dummy	11.71*** (2.01)
'Add-on at the POS' dummy	20.67*** (3.22)
'Add-on at the POS + easy alternatives' dummy	10.77*** (1.84)
'Add-on at the POS + harder alternatives' dummy	11.48*** (1.64)
Cognitive ability	-0.69 (0.57)
Cognitive ability * 'Up-front add-on' dummy	-4.57 (2.92)
Cognitive ability * 'Add-on at the POS' dummy	-10.20*** (3.92)
Cognitive ability * 'Add-on at the POS + easy alternatives' dummy	-8.14*** (2.24)
Cognitive ability * 'Add-on at the POS + harder alternatives' dummy	-5.39** (2.35)
Constant	1.50*** (0.35)
Observations	7,570

Note: The coefficient on the non-interacted treatment dummies shows how much higher or lower loss in the treatments is relative to the 'insurance only' treatment for respondents who answered the cognitive ability question incorrectly. For respondents who answered the cognitive ability question correctly, the effect of being in a particular treatment is the sum of the coefficient on the non-interacted dummy and the coefficient on the interacted dummy of said treatment.

4.8 Financial literacy

In addition to the cognitive ability question, the survey also included a question to elicit respondents' level of financial literacy.

If you have £100 in a savings account and the interest rate is 5% per year, after 2 years, how much money will you have in the account?

Please select one answer:

More than £110

Exactly £110

Less than £110

Respondents who correctly identified that they would have more than £110 in their savings account after two years worth of interest (79% of all respondents) paid significantly less for insurance in the experiment (almost 8 experimental currency units less), they were likely to have viewed more offers (0.5 more offers on average) and they were also slightly less likely to purchase insurance (3%). However, whether or not the respondent could answer the financial literacy question correctly did not significantly correlate with the amount of loss the respondent incurred throughout the experiment.

4.9 Number of insurance products currently owned

Respondents were also asked which insurance products they currently own and it was tested whether the number of insurance products owned had any relationship with the outcome variables of interest. The number of insurance products currently owned can proxy for both experience with insurance products, but also the general desire to be insured, i.e. risk aversion.

We find evidence that respondents who currently own more insurance products are also significantly more likely to purchase insurance in the experiment. In addition, they are also more likely to pay slightly less for insurance (1.3 experimental units less on average) and to view more insurance offers.

This analysis was repeated considering add-on and other insurance separately, but the same effects were found. The effects of owning add-on or non-add-on insurance were, where significant, also in the same direction. This means whether the respondents own add-on or non-add-on insurance does not explain behaviour in this experiment any further than whether they own insurance or not.

5 The effects of learning

The fact that each respondent completed the experiment multiple times, allows us to study the effects of repeating the exercise over time. On the one hand, respondents are likely to better understand the experiment after they have completed it several times, yet on the other hand they may have become tired during the experiment and therefore lost focus.⁶⁹

As can be seen in Table 8 below, the former effect appears to dominate with respondents performing better and better as they repeat the task. Both loss measures are reduced as the respondent repeated the exercise, the average price paid for insurance was nearly 3 experimental currency units lower for each extra repetition and respondents viewed on average 0.24 more insurance offers as they repeated the task.

Table 8: The effect of repeating the exercise multiple times								
	(1) Respondent purchased insurance	(2) Average price paid for insurance	(3) Number of insurance offers seen	(4) Respondent searched for alternative offers	(5) Loss 1	(6) Loss 2	(7) Error 1	(8) Error 2
Problem number	0.01*	-2.92***	0.24***	-0.01	-1.03**	-0.62*	-0.006**	-0.003
	(0.00)	(0.74)	(0.02)	(0.00)	(0.43)	(0.34)	(0.003)	(0.003)
Demographic control variables	Yes	Yes	Yes	Yes	Yes	yes	yes	yes
N	5,710	4,250	5,710	3,980	5,710	5,710	5,710	5,710

Note: Standard errors clustered at the subject level in parentheses. *** denotes significance at the 1% level, ** significance at the 5% level, and * significance at the 10% level.

The effect of repeating the task did not differ between treatments in a meaningful way.

The only difference which could be observed was that the number of insurance offers seen increased more steeply over time in the two treatments which offered the respondent access to standalone insurance offers compared to the 'Up-front add-on' treatment. However, when compared to the increase in the 'Add-on at the POS' treatment or the 'Insurance only' treatment, no significant difference was observed. For all other outcome variables, the effect of learning was the same across all treatments.

⁶⁹ It should also be noted that all treatment effects found in the experiment are robust to learning effects.

6 Time spent on a task

Table 9 demonstrates that respondents took significantly more time to complete one purchase in treatments which are more complex.

In the simplest treatment, the 'Insurance only' treatment, it took respondents an average of 2.5 minutes to complete one purchase. As the experiment design becomes progressively more complicated, respondents spent more and more time on one single task. In the 'Add-on at the POS + harder alternatives' the average amount of time spent on one task was close to seven minutes.

Table 9: Time spent per purchase, by treatment

	Time per purchase
Insurance only	2.54
Up-front add-on	3.03
Add-on at the POS	3.73
Add-on at the POS + easy alternatives	5.82
Add-on at the POS + harder alternatives	6.71

The most part of this variation can be explained by the fact that respondents simply viewed more offers (for both primary products and for insurance products) in the more complex treatments.

Nonetheless, we find that even controlling for the number of insurance offers viewed, time spent on the experiment correlates with a number of important outcome variables. As can be seen in Table 10 respondents who spent more time focusing on the experiment tended to pay slightly less and also had marginally lower losses. While none of these effects are large in magnitude, they are in line with the expectation that those participants who were more careful and took longer for each offer also performed better.

Table 10: The effect of time spent

	(1) Respondent purchased insurance	(2) Average price paid for insurance	(4) Respondent searched for alternative offers	(5) Loss 1	(6) Loss 2	(7) Error 1	(8) Error 2
Time spent	-0.000	-0.017***	-0.000	-0.004**	-0.004***	-0.000**	-0.000**
	(0.000)	(0.005)	(0.000)	(0.002)	(0.001)	(0.000)	(0.000)
Number of insurance offers seen	0.033***	-3.003***	0.055***	-0.449***	0.193	0.001	0.007***
	(0.002)	(0.237)	(0.003)	(0.154)	(0.123)	(0.001)	(0.001)
Demographic control variables	Yes	Yes	Yes	Yes	yes	Yes	yes
N	5,710	4,250	3,980	5,710	5,710	5,710	5,710

Source: Note: Standard errors clustered at the subject level in parentheses. *** denotes significance at the 1% level, ** significance at the 5% level, and * significance at the 10% level.

7 External validity of the results

Experiments are now widely used to inform policy and market interventions. In 2010, the OFT, as part the evidence base for the market study into the advertising of prices, commissioned a behavioural experiment that tested the impact of drip pricing on consumer choice and welfare. The experiment found that drip pricing reduced consumer welfare by 25% compared to simple per unit pricing. This study was then used as part of the evidence base to secure voluntary undertakings by airlines to include all additional charges in the headline price.⁷⁰ In 2011, Ofcom commissioned an experiment into consumer understanding of non-geographic numbers (e.g. 08, 09 and 118 numbers). This experiment tested how price presentation impacted consumer choice and how alternative interventions to improve consumer understanding of call charges performed. The research informed Ofcom's strategic review into non-geographic numbers, and a subsequent public consultation.⁷¹ Other recent experiments have investigated problems consumers have in understanding contracts as part of the OFT market study into consumer contracts⁷², consumer switching in telecommunications markets as part of Ofcom's strategic review into consumer switching⁷³, and the OFT's review into high-cost credit⁷⁴.

Experiments are powerful tools for testing the effect of different market practices and potential remedies.⁷⁵ However, experiments conducted in the laboratory and online must be carefully designed such that the observations from behavioural experiments are meaningful for policy development. This is often referred to as external validity or parallelism, and refers to the degree to which observations from experiments can be transferred to real market settings.

While behavioural experiments are an artificial construct, the processes in the experiment are real. Namely, respondents participate for monetary rewards/ earnings and follow rules established in the experiment environment in order to make these earnings, just as decisions in real markets have monetary rewards and costs.⁷⁶ Experiments allow investigation of behaviour in a richer environment than theory facilitates, while establishing control such that differences in behaviour can be observed and clearly mapped to changes in the experiment environment (treatments).⁷⁷

⁷⁰ OFT (2010), The impact of price frames on consumer decision making, a study by London Economics; and, OFT 2012.

⁷¹ Ofcom (2011), Experimental work on potential interventions in relation to non-geographic calls, a study by London Economics.

⁷² OFT (2010), Consumer understanding of contracts evidence from a behavioural experiment, a study by YouGov and London Economics.

⁷³ Ofcom (2010), Consumer switching: Experimental economics research, a report by London Economics.

⁷⁴ OFT (2010), Consumer decisions, information and understanding - A behavioural economics perspective, a report by Decision Technology.

⁷⁵ OFT and the Competition Commission (2010), Roadtesting consumer remedies, a report by London Economics.

⁷⁶ Plott.C. (1982) Industrial Organisation Theory and Experimental Economics, Journal of Economic Literature, vol. 20, pp. 1485 – 1527

⁷⁷ Huck.S and Tyran. J-R (2007) Can Markets be Trusted?, CEPR Policy Insight No.6.

In order for experiments to provide meaningful insights for policy, the experiment design must capture the important features of the market of interest while not introducing too much complexity.⁷⁸

In all experimental design there is a trade-off between more complex environments that capture multiple features of markets, and simplification and stylisation that focuses on the key characteristics important for consumer choice. Complexity can lead to more decision errors and noise in the data will invariably increase. This makes it more difficult to detect differences between treatments for given sample sizes. Simplification creates a situation where the learning from experiments can be asymmetric. If respondents in a simplified environment have no difficulties making decisions in the experiment, then it is hard to say that consumers in more complicated real world markets will also do well. However, if we observe difficulties in simple environments then we can be confident that problems will also arise in more complicated environments.

We designed a very simple search environment that was, given our requirements (search for primary products, availability of add-on insurance and standalone insurance), as simple as possible. While the environment was a simplified version of real add-on insurance markets the design carefully captured the key features of shopping around for add-on and standalone insurance, used products that had realistic prices, probability of loss and insurance prices, and required respondents to make decisions about search and purchase with visuals that simulated the key characteristics of online shopping.

The fact that our experiment environment was simplified, meant that purchasing add-on insurance in the experiment was a significantly easier task than purchasing add-on insurance in the real world. For example, the quality and risk of different insurance products was the same between providers for a given product. Therefore, respondents only had to minimise the cost of the primary product and the insurance offer. In addition, the comparison of alternative standalone insurance offers with the add-on at point of sale insurance was much easier (even in the hardest set-up) than in real markets. We can therefore be confident that the problems respondents experienced between treatments in this experiment will also be experienced by consumers in real markets.

Another important element of experimental design is saliency. Saliency means that a respondent's earnings in the experiment are determined only by features included in the experiment and by no other uncontrollable variables. This is an important condition as it ensures that observed behaviour can be explained by variables and conditions explicitly included in the experiment. For example, a fixed payment of £5 for participation in an experiment is not salient and in this case behaviour is not induced correctly in the experiment.

In our experiment we used values and costs that were representative of the real values and costs in the primary and insurance markets. Respondents' were provided with clear instructions and completed an understanding test before they started the experiment to ensure they understood

⁷⁸ R.G. Cummings, M. McKee, L.O. Taylor (2001) "To whisper in the ears of princes: laboratory economic experiments and environmental policy", In *Frontiers of Environmental Economics*. Edward Elgar Publishing

the task and how their earnings in the experiment were related to their (own) decisions in the experiment. Earnings within the experiment were then translated into pounds sterling at the end of the experiment.

7.1 The results

The results from the experiment provide clear evidence that the treatments do affect behaviour, and that some treatments are clearly associated with higher losses than others.

In particular a number of results stand out:

Combining the option to purchase insurance with the primary product in the treatment ‘Up-front add-on’ did not impact the search behaviour of respondents or the propensity to take-up insurance. Requiring respondents to shop around for both the primary product and the insurance increased the computational difficulty of the task and we find that errors increased when respondents had to compare offers with two parts (primary and insurance) as opposed to searching for standalone insurance only.

Delaying the add-on insurance to the point of sale was associated with a number of effects: respondents viewed fewer insurance offers, paid higher prices for add-on insurance, made larger losses and more errors, and resulted in higher profits for insurance providers. All these effects are likely to be stronger in the real world where add-on insurance offers are less pronounced, less easily accessible and are often encountered only much later in the purchasing process than the ‘one-click’ required in the experiment. In addition, sellers in the real world are likely to employ cross-subsidisation between the cost of the primary product and the add-on insurance, something which our model does not do. Sellers are likely to select the relative prices for primary and add-on insurance which maximise profit, meaning once more that our results are likely to be an underestimation. Similarly, the price distribution for stand-alone and add-on insurance are the same in the experiment. This is unlikely to be the case in the real market where sellers may tailor prices between stand-alone and add-ons. As such, the value of search for additional insurance offers would be greater in the field than in the experiment in cases where the price distribution for standalone offers is lower than add-ons.

We also found clear evidence that making it harder to search for alternative insurance offers had adverse effects for respondents in the experiment: respondents viewed fewer insurance offers when it was harder to search for alternatives, they were more likely to purchase the first insurance offer they viewed, they paid more for insurance and sellers made higher profits. This result further helps establish that any results found in this study are likely to be an underestimation of the true effects in the real world. This is because, although we had two levels of ‘difficulty’ in searching for alternative insurance providers, both are significantly easier than it would be for a shopper in the real world. In a real market place, shoppers are often not even made aware of the fact that there are alternative insurance providers and even if they were aware of it, searching for

alternatives is significantly more complicated than simply pressing a search button next to the check-out of the primary product.

In our experiment, prices are exogenously fixed while in real markets they are chosen. Given our data it appears clear that certain designs (such as delaying the add-on offer to the POS) may enable firms to charge higher prices. Consumers would then suffer in two ways: first, from the direct negative consequences we measured in this experiment *and* second, from the higher prices. Similarly, the price distribution for stand-alone and add-on insurance are the same in the experiment. This is unlikely to be the case in the real market where sellers may tailor prices between stand-alone and add-ons. As such, the value of search for additional insurance offers would be greater in the field than in the experiment when prices for stand-alone are lower than add-on.

We, therefore, have good reason to believe in the general external validity of our results – that these practices do affect consumer behaviour and that what we identify in the online experiment is probably rather the tip of the iceberg as there are many aspects of real-life markets that will accentuate the problems we document here. Although inevitably there are also likely to be some factors in real life which will mitigate concerns about practices, such as the desire for firms to build reputation, and consumers to learn about honest firms.

7.2 Limitations

However, despite our firm belief that the results estimated here carry significant external validity, some limitations of our findings have to be noted.

Point estimates found are likely to have less external validity than the difference found between treatments. That is, although we find that respondents were on average willing to pay twice the cost of fair insurance to insurance themselves against their home boiler breaking down, it is not clear that this is also what they would be willing to pay in the real world. The reason for this is that the experiment setting is very different from the setting in the real world and that the respondents taking part in the experiment are not actually shopping for a new home boiler. However, when we observe that the price respondents were willing to pay for the insurance on their home boiler is higher when the add-on insurance offer is delayed to the POS, as opposed to being displayed upfront, we can reasonably extrapolate that this higher willingness to pay for add-on insurance carries over to the real world. This is simply because the timing of the add-on offer was the only difference between the two treatments and there is no reason to believe why respondents in the real world should react differently to such delay.

Although the goal was to recruit a representative sample of participants, it is worth pointing out that the final sample of respondents who took part in our experiment was somewhat skewed towards men, and upper and middle class respondents.

We cannot discount the possibility that this is, to some extent, caused by *endogenous selection*. That is, maybe respondents from a lower socio-demographic groups and women felt less confident doing this experiment and as a result decided to not go through with the full experiment.

While this may somewhat bias the point estimates we obtain in the experiment (e.g. maybe more insurance offers would have been bought if more women were in the experiment) it is unlikely to present a problem to the external validity of our results. If anything, the fact that respondents who did not feel comfortable taking part in the experiment dropped out is likely to strengthen the external validity of the main findings.

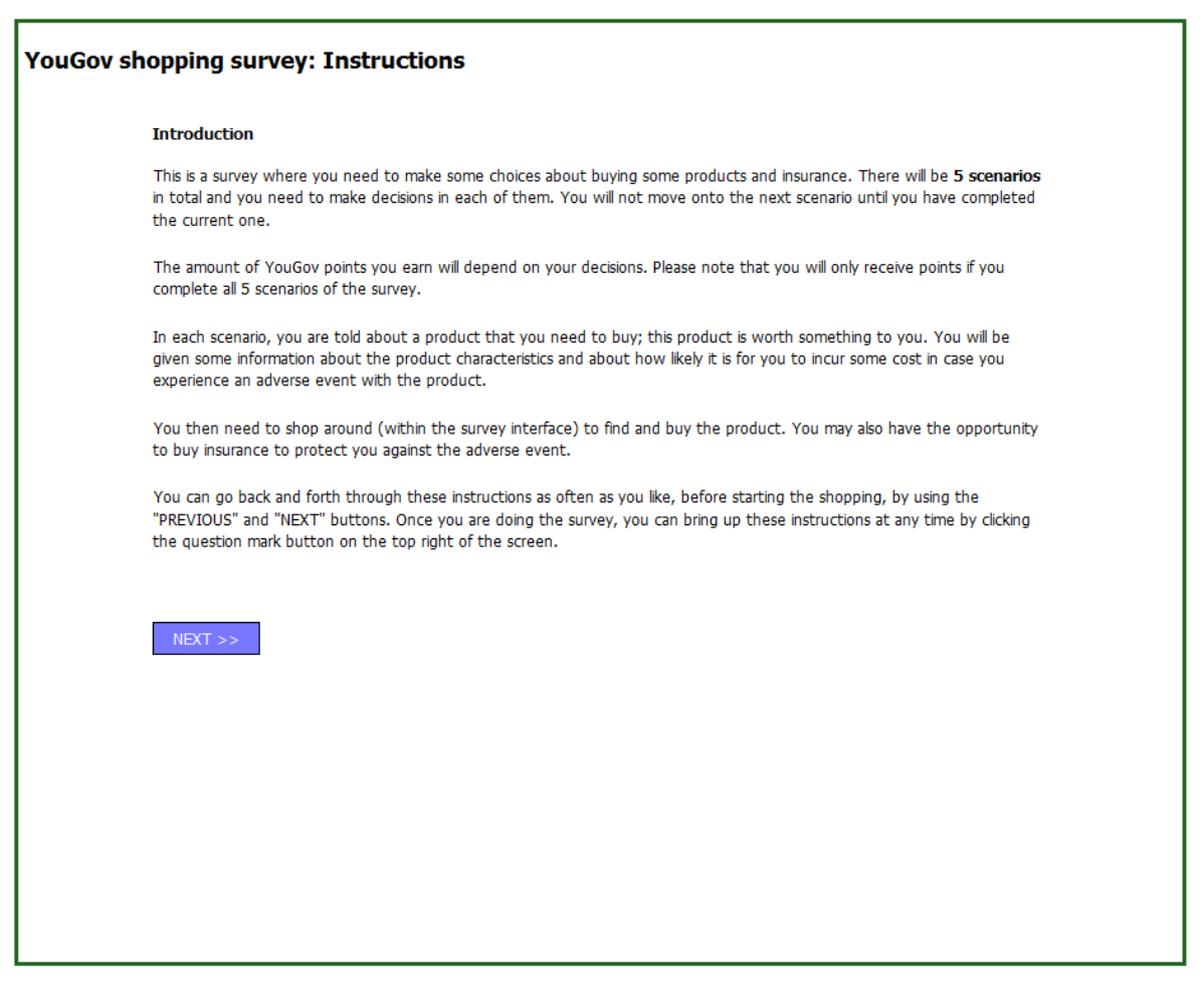
If only those respondents who feel, relatively speaking, more comfortable with the experiment took part, one can only suspect that those who felt less comfortable would have performed worse. The loss and error rates we measure are therefore likely to be an underestimation of the loss and error rates which would be observed in the field because of the somewhat endogenous sample selection; and, circumstances in which the confident respondents experienced difficulties in search and choice are likely to have at least as strong an effect on those who naturally find the task more difficult overall.

The final limitation, which was already noted above, is that even when it comes to looking at differences across treatments we are likely to underestimate the true effect of a particular marketing practice simply due to the significantly easier environment in which respondents make their choices.

Annex 1 Instructions

Instruction screens shown to all participants prior to starting the experiment are presented below. The example product 'washing machine' was used in the instructions. It is important to provide instructions with a product other than the ones used in the experiment to avoid any anchoring of responses in the experiment to example products and values provided in the instructions. Following the instructions, all participants completed a quiz to check that the respondents understood the task.

Figure 35: Instruction screen (1)



YouGov shopping survey: Instructions

Introduction

This is a survey where you need to make some choices about buying some products and insurance. There will be **5 scenarios** in total and you need to make decisions in each of them. You will not move onto the next scenario until you have completed the current one.

The amount of YouGov points you earn will depend on your decisions. Please note that you will only receive points if you complete all 5 scenarios of the survey.

In each scenario, you are told about a product that you need to buy; this product is worth something to you. You will be given some information about the product characteristics and about how likely it is for you to incur some cost in case you experience an adverse event with the product.

You then need to shop around (within the survey interface) to find and buy the product. You may also have the opportunity to buy insurance to protect you against the adverse event.

You can go back and forth through these instructions as often as you like, before starting the shopping, by using the "PREVIOUS" and "NEXT" buttons. Once you are doing the survey, you can bring up these instructions at any time by clicking the question mark button on the top right of the screen.

[NEXT >>](#)

Figure 36: Instruction screen (2)

YouGov shopping survey: Instructions

Example scenario

We will now describe an example scenario, similar to that which you will encounter in the survey.

In the example scenario, you are told that you need to buy a Second hand washing machine. You will see a box like the following, describing the product characteristics:

Second hand washing machine	
	Product title: Second hand washing machine
	Product value to you: £390.00
	Potential adverse event: Washing machine breaks down and requires a repair
	Cost of adverse event: £60.00
	Likelihood of adverse event: 2 out of 100 buyers

Full product & scenario description: A washing machine with: 1500rpm spin, a timer, 15 programmes, and self-cleaning. It is possible that the washing machine can break down. You can buy an annual insurance policy to insure against the risk of break down. If you don't buy insurance, you'll have to pay the cost of repair if the washing machine breaks down. The cost and likelihood of this are given above.

Your task is to shop around and buy the product. You can also choose to buy insurance; insurance costs money but protects you against the cost if the adverse event occurs. Note that the likelihood of an adverse event happening doesn't depend on where you buy your product.

In addition to the above, the amount you earn from a scenario depends on:

- the price you pay for the product
- the price you pay for insurance (if you buy it)
- whether an adverse event occurs.

<< PREVIOUS

NEXT >>

Figure 37: Instruction screen (3)

YouGov shopping survey: Instructions

Example scenario (continued)

Second hand washing machine

	Product title: Second hand washing machine
	Product value to you: £390.00
	Potential adverse event: Washing machine breaks down and requires a repair
	Cost of adverse event: £60.00
	Likelihood of adverse event: 2 out of 100 buyers

Full product & scenario description: A washing machine with: 1500rpm spin, a timer, 15 programmes, and self-cleaning. It is possible that the washing machine can break down. You can buy an annual insurance policy to insure against the risk of break down. If you don't buy insurance, you'll have to pay the cost of repair if the washing machine breaks down. The cost and likelihood of this are given above.

If the adverse event occurs, you will have to pay the cost of the adverse event if you are not insured. If you do have insurance, you'll pay nothing as it will be covered by the insurance. Whether the adverse event happens for you depends on chance (for this example, the computer would choose 2 out of every 100 buyers at random).

How much you earn in each scenario is calculated by taking the value of the product to you and subtracting the cost you incur in an adverse event (if it happens) and the prices you pay for the product and insurance (if you buy it).

So, supposing the price you pay for the Second hand washing machine is £280.00 and you don't purchase insurance. Then you'll earn:

- $£390.00 - £280.00 = £110.00$ if an adverse event doesn't occur (the washing machine doesn't break down).
- $£390.00 - £280.00 - £60.00 = £50.00$ if an adverse event does occur (the washing machine does break down).

Alternatively, suppose you pay £250.00 for the Second hand washing machine and £45.00 for insurance. Then you'll earn:

- $£390.00 - £250.00 - £45.00 = £95.00$ regardless of whether an adverse event occurs or not.

<< PREVIOUS

NEXT >>

Figure 38: Instruction screen (4)

YouGov shopping survey: Instructions

How you shop

On the survey screen, you will see the product description box (like the one you have seen on the previous screens of the instructions) together with likelihood and cost of an adverse event. You cannot buy anything until you have first found a price. You can get prices by clicking on the "Search for product prices..." button. After a short delay while we search for prices, a price for the product will be displayed. You can accept this buy clicking "Buy" (this will put your product into your cart).

Or, if you want to keep searching for more prices, you can click on the button again. *As you make further searches, the delay becomes progressively longer.* You can review the prices you've seen by clicking on the Shop number at the bottom of the shop box (where it says "Go to:....").

In addition to shopping for the product, you can also buy insurance to cover you in case of an adverse event. You can buy this with your product.

Once you have put the product and any insurance into your cart, you then click "Confirm" to buy. That completes your shopping for a scenario. Remember there are 5 scenarios in total.

To remove an item from your cart, just click the white cross on a red background next to it.

<< PREVIOUS

NEXT >>

Figure 39: Instruction screen (5)

YouGov shopping survey: Instructions

Your payment

The amount you earn for taking part in this part of the survey will 75 points (just for completing the survey), plus the amounts (in £) you earn in the 5 scenarios added together. This will then be converted to YouGov points at a rate of:

1 YouGov point = £5

So, if you earn a total of £1000 in the five scenarios of the survey, you will earn 200 YouGov points plus 75 points for completing the survey.

Your points will be credited to your YouGov account within a few days. You will only learn your earnings once you have completed all 5 scenarios (at that point you will be told whether any of the products you bought experienced an adverse events or not).

<< PREVIOUS

START SURVEY >>

Figure 40: Understanding test

YouGov shopping survey: Test your understanding!

Second hand washing machine



Product title:	Second hand washing machine
Product value to you:	£390.00
Potential adverse event:	Washing machine breaks down and requires a repair
Cost of adverse event:	£60.00
Likelihood of adverse event:	2 out of 100 buyers

Full product & scenario description: A washing machine with: 1500rpm spin, a timer, 15 programmes, and self-cleaning. It is possible that the washing machine can break down. You can buy an annual insurance policy to insure against the risk of break down. If you don't buy insurance, you'll have to pay the cost of repair if the washing machine breaks down. The cost and likelihood of this are given above.

Before we start the survey, we will just ask a few quick questions to ensure you understand the survey instructions - you have a better chance of earning more if you understand the instructions properly! If you don't get the answers correct, we will explain them in more detail.

1. For the product described above, how many, out of every 100 buyers will experience an adverse event?

- a. 2 out of 100 b. 5 out of 100 c. 10 out of 100 d. 98 out of 100

The correct answer is a.: two out of every 100 buyers (participants in this survey) would experience an adverse event with this product. This would cause them to incur a cost if they are not insured.

2. Suppose you paid £320 for the product above and you chose to buy annual insurance for £10. What are your earnings (regardless of whether the adverse event happens)?

- a. £90 b. £70 c. £60 d. £10

The correct answer is c.: your earnings are the value of the product to you minus the amounts spent on buying it and insurance: $£390 - £320 - £10 = £60$.

3. Suppose you paid £320 for the product above and did not choose to buy annual insurance. What are your earnings if the adverse event happens?

- a. £90 b. £70 c. £60 d. £10

The correct answer is d.: your earnings are the value of the product to you minus the amounts spent on buying it and cost of an adverse event (if it occurs when you don't buy insurance): $£390 - £320 - £60 = £10$.

4. How many scenarios will you face in the survey?

- a. 1 b. 2 c. 5 d. 10

The correct answer is c.: you will encounter 5 scenarios, each with a different product.

[Start the survey!](#)

Annex 2 Screenshots

A2.1 'Insurance only' Treatment

Figure 41: 'Insurance only' starting screen

YouGov shopping survey: Scenario 1 of 5

Home boiler

	Product title: Home boiler
	Product value to you: £1164.00
	Potential adverse event: Boiler breaks down and requires emergency repair call out
	Cost of adverse event: £370.00
	Likelihood of adverse event: 4 out of 100 buyers

Think Again

Full product & scenario description: A home combi boiler providing a high efficiency heating solution. The boiler may break down at some point and require an emergency call out and repair. You can buy an annual insurance policy to insure against this risk. If you don't have insurance, you'll have to pay the cost of call out and repair if the boiler breaks down. The expected cost and likelihood of this are given above.

Cart / Checkout
No items have been selected for purchase.
[I don't want to buy insurance](#)

Your purchase
You have successfully purchased this product.
The price you have paid is show below.
Home boiler price: £918.00

Look for independent insurance quotes...
[Search for independent insurance quotes...](#)
Go to quote:

Source: London Economics Add-on insurance experiment 2013

Figure 42: 'Insurance only' fetching quotes

YouGov shopping survey: Scenario 1 of 5

Home boiler



Product title: Home boiler
Product value to you: £1164.00
Potential adverse event: Boiler breaks down and requires emergency repair call out
Cost of adverse event: £370.00
Likelihood of adverse event: 4 out of 100 buyers

Think Again

Full product & scenario description: A home combi boiler providing a high efficiency heating solution. The boiler may break down at some point and require an emergency call out and repair. You can buy an annual insurance policy to insure against this risk. If you don't have insurance, you'll have to pay the cost of call out and repair if the boiler breaks down. The expected cost and likelihood of this are given above.

Cart / Checkout

No items have been selected for purchase.

[I don't want to buy insurance](#)

Your purchase

You have successfully purchased this product.
The price you have paid is show below.
Home boiler price: £118.00

Fetching insurance quote...

Go to quote: 1

Source: London Economics Add-on insurance experiment 2013

Figure 43: 'Insurance only' accepting a quote

YouGov shopping survey: Scenario 1 of 5

Home boiler



Product title:	Home boiler
Product value to you:	£1164.00
Potential adverse event:	Boiler breaks down and requires emergency repair call out
Cost of adverse event:	£370.00
Likelihood of adverse event:	4 out of 100 buyers

Think Again

Full product & scenario description: A home combi boiler providing a high efficiency heating solution. The boiler may break down at some point and require an emergency call out and repair. You can buy an annual insurance policy to insure against this risk. If you don't have insurance, you'll have to pay the cost of call out and repair if the boiler breaks down. The expected cost and likelihood of this are given above.

Cart / Checkout

Buy insurance separately: £22.00 ✘

Total cost: £22.00

[Confirm purchase](#)

Your purchase

You have successfully purchased this product.

The price you have paid is show below.

Home boiler price: £18.00

Insurance quote 2

Buy insurance separately for: £22.00

[Search for more quotes](#)

Go to quote: 1 2

Source: London Economics Add-on insurance experiment 2013

Figure 44: 'Insurance only' confirming the purchase

The screenshot displays a 'YouGov shopping survey' for a 'Home boiler'. The product details include a 'HEATER' with a temperature of 28°C, a 'Product title', 'Product value to you', 'Potential adverse event: out', 'Cost of adverse event: £370.00', and 'Likelihood of adverse event: 4 out of 100 buyers'. A 'Think Again' button is present. A 'Full product & scenario description' explains that the boiler may break down, requiring an emergency call out and repair, and that an annual insurance policy can be purchased to cover this risk. The 'Your purchase' section shows a successful purchase of the boiler for £918.00. The 'Insurance quote 3' section shows a quote for £66.00 with an 'Accept quote' button and a 'Search for more quotes...' button. A 'Cart / Checkout' summary shows 'Buy insurance separately: £22.00' and 'Total cost: £22.00' with a 'Confirm purchase' button. A dialog box from 'www.forit.co.uk' asks 'Are you sure you want to make these purchases?' with 'OK' and 'Cancel' buttons.

Source: London Economics Add-on insurance experiment 2013

A2.2 'Up-front add-on' treatment

Figure 45: 'Up-front add-on' searching for offers

YouGov shopping survey: Scenario 1 of 5

Luxury holiday for 2 people



Product title:	Luxury holiday for 2 people
Product value to you:	£5200.00
Potential adverse event:	Holiday is cancelled
Cost of adverse event:	£3800.00
Likelihood of adverse event:	2 out of 100 buyers

Full product & scenario description: A luxury safari holiday to Kenya including all flights, hotel, sightseeing tours and food. It is possible that the holiday is cancelled. You can buy an annual insurance policy to insure against the risk of cancellation. If the holiday is cancelled and you don't have travel insurance, you'll lose most of the money you paid when booking the trip. The cost and likelihood of this are given above.

Cart / Checkout

No items have been selected for purchase.

Shop 1

Luxury holiday for 2 people price:	£4649.00	Buy without insurance
Add insurance for: (equivalent price per month)	£19.50	Buy with insurance
		Search for more prices

Go to shop:

Source: London Economics Add-on insurance experiment 2013

Figure 46: 'Up-front add-on' selecting an offer

YouGov shopping survey: Scenario 1 of 5

Luxury holiday for 2 people



Product title:	Luxury holiday for 2 people
Product value to you:	£5200.00
Potential adverse event:	Holiday is cancelled
Cost of adverse event:	£3800.00
Likelihood of adverse event:	2 out of 100 buyers

Full product & scenario description: A luxury safari holiday to Kenya including all flights, hotel, sightseeing tours and food. It is possible that the holiday is cancelled. You can buy an annual insurance policy to insure against the risk of cancellation. If the holiday is cancelled and you don't have travel insurance, you'll lose most of the money you paid when booking the trip. The cost and likelihood of this are given above.

?

Cart / Checkout

Buy product: £4402.00 x

Buy insurance with product: £309.96

Total cost: £4711.96

[Confirm purchase](#)

Shop 2

Luxury holiday for 2 people price: £4402.00

Add insurance for: (equivalent price per month) £25.83

[Search for more prices](#)

Go to shop: 1 2

Source: London Economics Add-on insurance experiment 2013

A2.3 'Add-on at the POS' treatment

Figure 47: 'Add-on at the POS' searching for primary products

YouGov shopping survey: Scenario 1 of 5

Laptop computer



Product title:	Laptop computer
Product value to you:	£1274.00
Potential adverse event:	Accidental damage requiring a repair
Cost of adverse event:	£330.00
Likelihood of adverse event:	7 out of 100 buyers

Full product & scenario description: A top of the range laptop with a 17 inch screen, i7 mobile processor, SSD hard drive. It is possible that the laptop might suffer some accidental damage. You can buy an annual insurance policy to insure against the risk of accidental damage. If the laptop suffers damage, you'll have to pay the cost of repair if you don't have insurance. The expected cost of repair and the likelihood of this are given above.

Shop 1

Laptop computer price: £1129.00

Go to shop:

Cart / Checkout

No items have been selected for purchase.

?

Source: London Economics Add-on insurance experiment 2013

Figure 48: 'Add-on at the POS' revelation of insurance

YouGov shopping survey: Scenario 1 of 5 ?

Laptop computer



Product title:	Laptop computer
Product value to you:	£1274.00
Potential adverse event:	Accidental damage requiring a repair
Cost of adverse event:	£330.00
Likelihood of adverse event:	7 out of 100 buyers

Full product & scenario description: A top of the range laptop with a 17 inch screen, i7 mobile processor, SSD hard drive. It is possible that the laptop might suffer some accidental damage. You can buy an annual insurance policy to insure against the risk of accidental damage. If the laptop suffers damage, you'll have to pay the cost of repair if you don't have insurance. The expected cost of repair and the likelihood of this are given above.

Cart / Checkout

No items have been selected for purchase.

Shop 1

Laptop computer price: £1129.00 [Buy without insurance](#)

Add insurance for: £65.00 [Buy with insurance](#)

[Search for more prices...](#)

Go to shop:

Source: London Economics Add-on insurance experiment 2013

Figure 49: 'Add-on at the POS' selecting an offer

YouGov shopping survey: Scenario 1 of 5 ?

Laptop computer



Product title:	Laptop computer
Product value to you:	£1274.00
Potential adverse event:	Accidental damage requiring a repair
Cost of adverse event:	£330.00
Likelihood of adverse event:	7 out of 100 buyers

Full product & scenario description: A top of the range laptop with a 17 inch screen, i7 mobile processor, SSD hard drive. It is possible that the laptop might suffer some accidental damage. You can buy an annual insurance policy to insure against the risk of accidental damage. If the laptop suffers damage, you'll have to pay the cost of repair if you don't have insurance. The expected cost of repair and the likelihood of this are given above.

Cart / Checkout

Buy product:	£1129.00	x
Buy insurance with product:	£65.00	
Total cost:	£1194.00	

[Confirm purchase](#)

Shop 1

Laptop computer price:	£1129.00
Add insurance for:	£65.00

[Search for more prices...](#)

Go to shop: 1 2

Source: London Economics Add-on insurance experiment 2013

A2.4 'Add-on at the POS + easy alternatives'

Figure 50: 'Add-on at the POS + easy alternatives' searching for primary product

YouGov shopping survey: Scenario 4 of 5

12 days car hire in Spain



Product title:	12 days car hire in Spain
Product value to you:	£247.00
Potential adverse event:	You are involved in a collision
Cost of adverse event:	£500.00



Likelihood of adverse event:	5 out of 100 buyers
-------------------------------------	---------------------

Full product & scenario description: You are going to Spain for 12 days and will hire a car. The car hire comes with basic car insurance included, but there is a £500 excess (the uninsured part of the repair costs) you have to pay if you have an accident. You can buy an insurance policy to cover the excess for the rental period. If you buy this insurance, you will not have to pay any excess in the event of an accident.

Shop 1
12 days car hire in Spain price: £197.00

Go to shop:

Look for independent insurance quotes...

Go to quote:

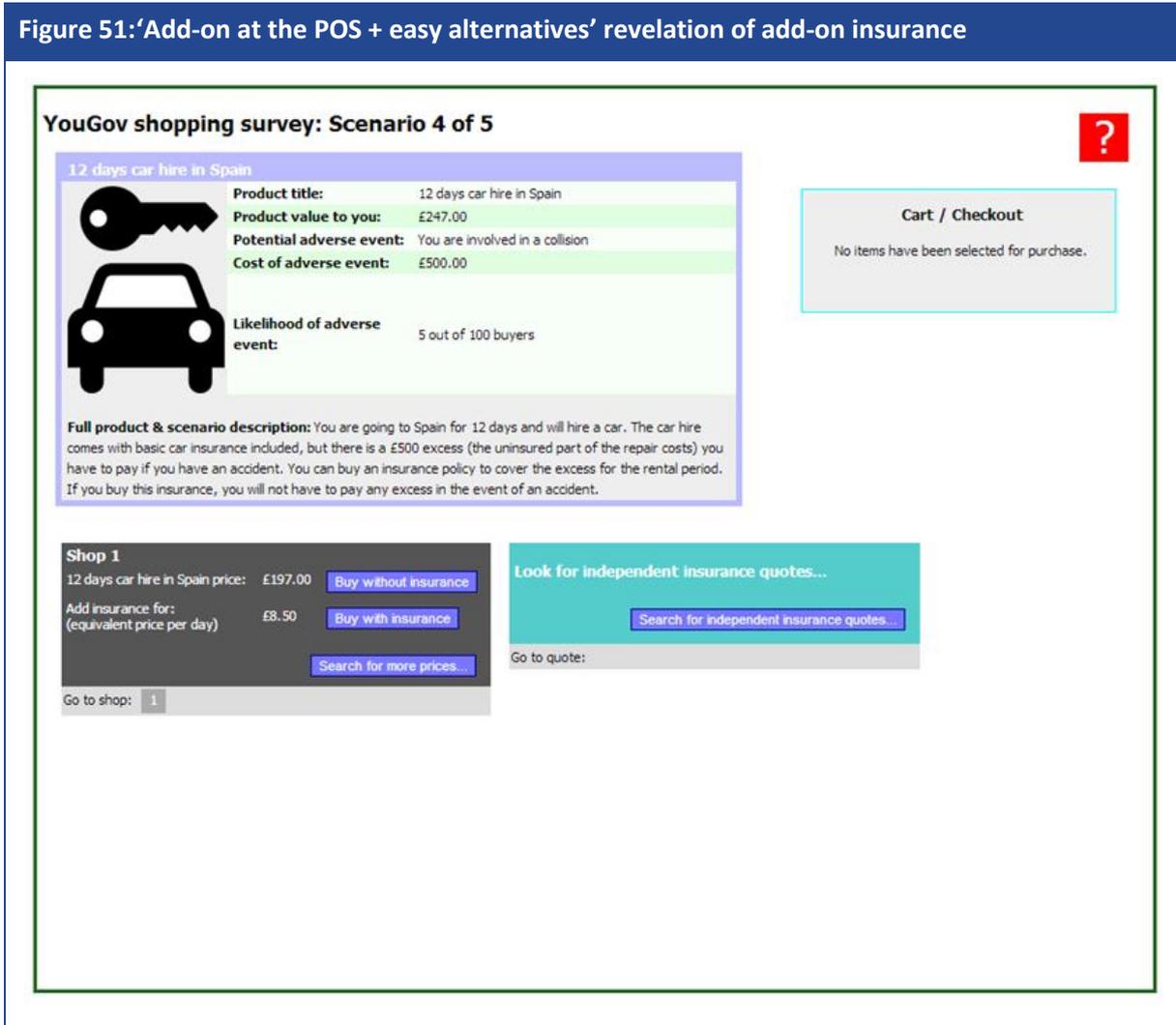
Cart / Checkout

No items have been selected for purchase.



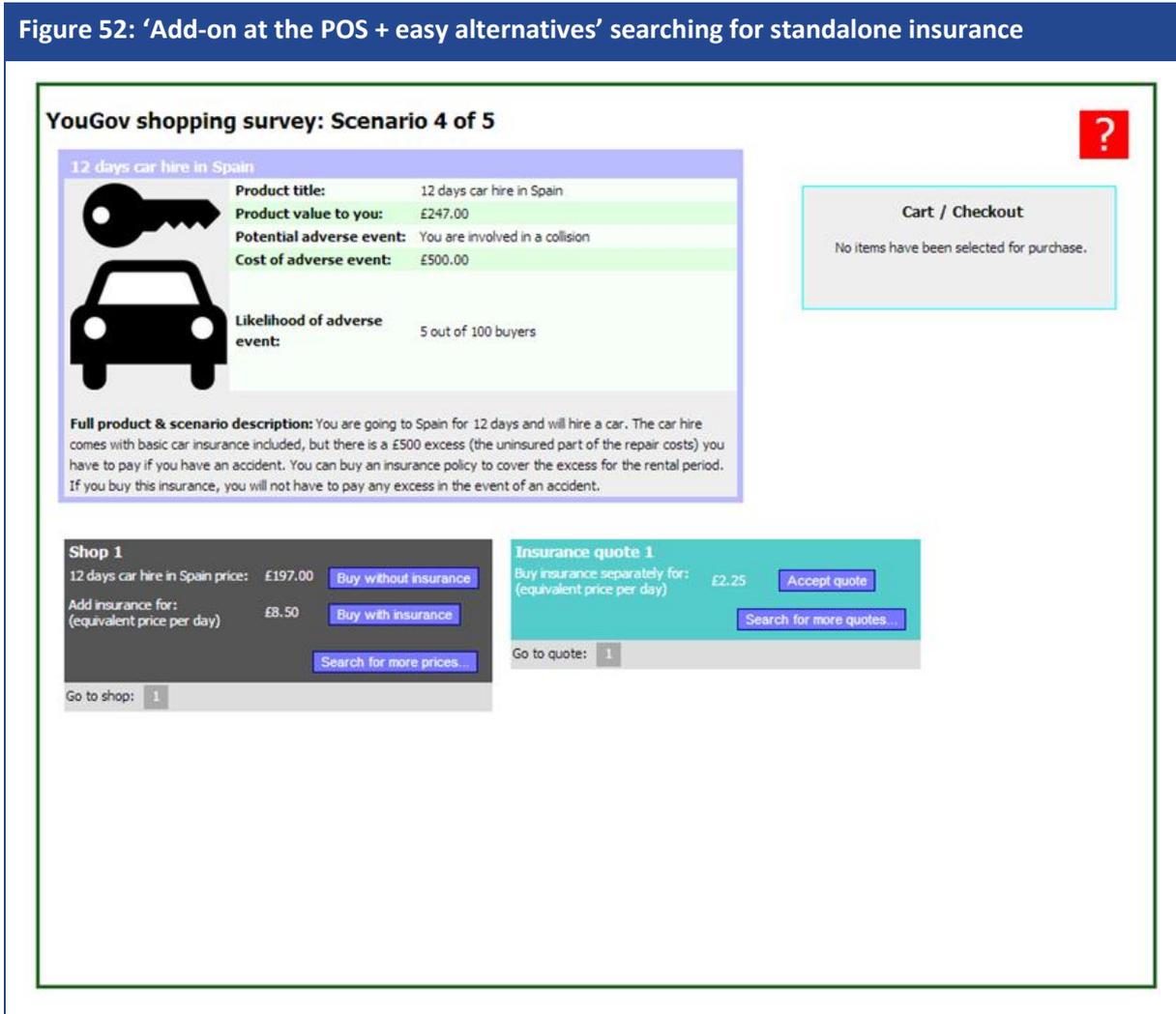
Source: London Economics Add-on insurance experiment 2013

Figure 51: 'Add-on at the POS + easy alternatives' revelation of add-on insurance



Source: London Economics Add-on insurance experiment 2013

Figure 52: 'Add-on at the POS + easy alternatives' searching for standalone insurance



Source: London Economics Add-on insurance experiment 2013

Figure 53: 'Add-on at the POS +easy alternatives' selecting offer

YouGov shopping survey: Scenario 4 of 5 ?

12 days car hire in Spain

Product title:	12 days car hire in Spain
Product value to you:	£247.00
Potential adverse event:	You are involved in a collision
Cost of adverse event:	£500.00

Likelihood of adverse event:	5 out of 100 buyers
-------------------------------------	---------------------

Full product & scenario description: You are going to Spain for 12 days and will hire a car. The car hire comes with basic car insurance included, but there is a £500 excess (the uninsured part of the repair costs) you have to pay if you have an accident. You can buy an insurance policy to cover the excess for the rental period. If you buy this insurance, you will not have to pay any excess in the event of an accident.

Cart / Checkout

Buy product:	£197.00	X
Buy insurance separately:	£27.00	X
Total cost:	£224.00	

[Confirm purchase](#)

Shop 1

12 days car hire in Spain price: £197.00

Add insurance for:
(equivalent price per day) £8.50

[Search for more prices...](#)

Go to shop: 1

Insurance quote 1

Buy insurance separately for:
(equivalent price per day) £2.25

[Search for more quotes...](#)

Go to quote: 1 2

Source: London Economics Add-on insurance experiment 2013

A2.5 'Add-on at the POS + harder alternatives'

Figure 54: 'Add-on at the POS + harder alternatives' searching for primary product

YouGov shopping survey: Scenario 3 of 5

Tablet computer



Product title:	Tablet computer
Product value to you:	£624.00
Potential adverse event:	Loss, theft or breakdown
Cost of adverse event:	£450.00

Likelihood of adverse event: 15 out of 100 buyers

Full product & scenario description: A tablet computer from a brand manufacturer, featuring 32Gb storage, WiFi, quad core graphics and a 9.7 inch screen and weighing only 670 grams. It is possible that the tablet may be stolen, lost or break down. You can buy an annual insurance policy to insure against these risks. If the tablet is stolen, lost or breaks down, you'll have to pay the cost of repair or replacement if you don't have insurance. The expected cost of repair and likelihood of this are given above.

Cart / Checkout

No items have been selected for purchase.

Shop 1

Tablet computer price: £533.00 [Buy](#)

[Click here to see & search for insurance quotes...](#)

[Search for more prices...](#)

Go to shop:

Source: London Economics Add-on insurance experiment 2013

Figure 55: 'Add-on at the POS + harder alternatives' revelation of add-on insurance

YouGov shopping survey: Scenario 3 of 5

Tablet computer

Product title:	Tablet computer
Product value to you:	£624.00
Potential adverse event:	Loss, theft or breakdown
Cost of adverse event:	£450.00
Likelihood of adverse event:	15 out of 100 buyers

Cart / Checkout

No items have been selected for purchase.

[Click here to see & search for insurance quotes...](#)

Full product & scenario description: A tablet computer from a brand manufacturer, featuring 32Gb storage, WiFi, quad core graphics and a 9.7 inch screen and weighing only 670 grams. It is possible that the tablet may be stolen, lost or break down. You can buy an annual insurance policy to insure against these risks. If the tablet is stolen, lost or breaks down, you'll have to pay the cost of repair or replacement if you don't have insurance. The expected cost of repair and likelihood of this are given above.

Shop 2

Tablet computer price:	£498.00	Buy without insurance
Add insurance for:	£324.00	Buy with insurance
Search for more prices...		

Go to shop: 1 2

Source: London Economics Add-on insurance experiment 2013

Figure 56: 'Add-on at the POS + harder alternatives' searching for standalone insurance

YouGov shopping survey: Scenario 3 of 5



Product title: Tablet computer
Product value to you: £624.00
Potential adverse event: Loss, theft or breakdown
Cost of adverse event: £450.00
Likelihood of adverse event: 15 out of 100 buyers

Full product & scenario description: A tablet computer from a brand manufacturer, featuring 32Gb storage, WiFi, quad core graphics and a 9.7 inch screen and weighing only 670 grams. It is possible that the tablet may be stolen, lost or break down. You can buy an annual insurance policy to insure against these risks. If the tablet is stolen, lost or breaks down, you'll have to pay the cost of repair or replacement if you don't have insurance. The expected cost of repair and likelihood of this are given above.

[Click here to see & search for Product prices.](#)

Insurance quote 1
Buy insurance separately for: £206.00 [Accept quote](#)
[Search for more quotes...](#)
Go to quote: 1

Cart / Checkout
No items have been selected for purchase.

Source: London Economics Add-on insurance experiment 2013

Figure 57: 'Add-on at the POS + harder alternatives' selecting offer

YouGov shopping survey: Scenario 3 of 5

Tablet computer

Product title:	Tablet computer
Product value to you:	£624.00
Potential adverse event:	Loss, theft or breakdown
Cost of adverse event:	£450.00
Likelihood of adverse event:	15 out of 100 buyers

Full product & scenario description: A tablet computer from a brand manufacturer, featuring 32Gb storage, WiFi, quad core graphics and a 9.7 inch screen and weighing only 670 grams. It is possible that the tablet may be stolen, lost or break down. You can buy an annual insurance policy to insure against these risks. If the tablet is stolen, lost or breaks down, you'll have to pay the cost of repair or replacement if you don't have insurance. The expected cost of repair and likelihood of this are given above.

Cart / Checkout

Buy product: £498.00 x

Buy insurance with product: £324.00

Total cost: £822.00

[Confirm purchase](#)

Shop 2

Tablet computer price: £498.00

Add insurance for: £324.00

[Search for more prices...](#)

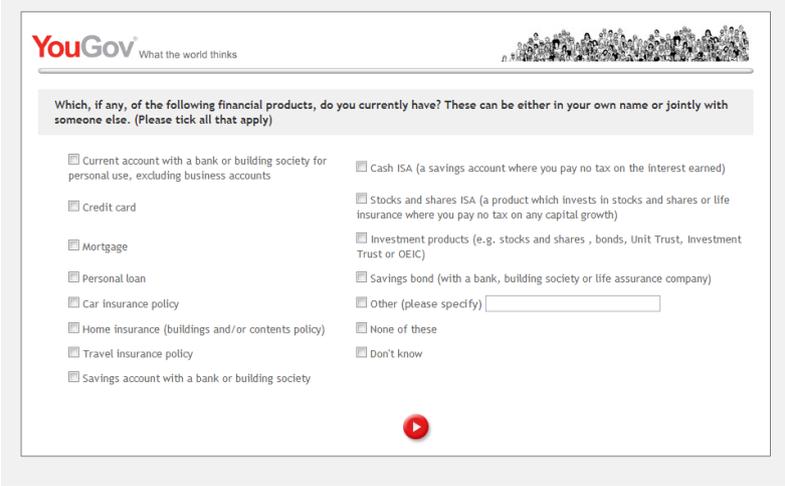
Go to shop: 1 2

[Click here to see & search for Insurance quotes...](#)

Source: London Economics Add-on insurance experiment 2013

Annex 3 Questionnaire

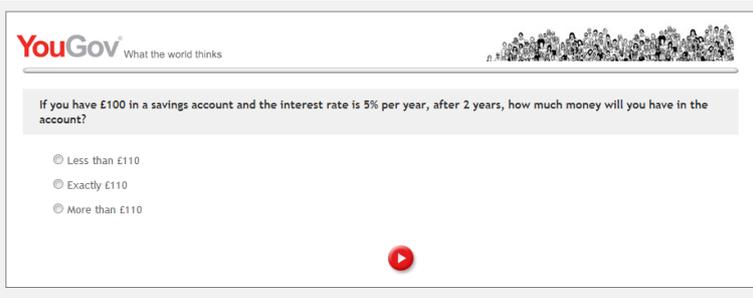
Figure 58: Financial products held



The screenshot shows a YouGov questionnaire interface. At the top left is the YouGov logo with the tagline 'What the world thinks'. At the top right is a small graphic of a crowd of people. The main question is: 'Which, if any, of the following financial products, do you currently have? These can be either in your own name or jointly with someone else. (Please tick all that apply)'. Below the question is a list of 14 financial products, each with a checkbox: Current account with a bank or building society for personal use, excluding business accounts; Credit card; Mortgage; Personal loan; Car insurance policy; Home insurance (buildings and/or contents policy); Travel insurance policy; Savings account with a bank or building society; Cash ISA (a savings account where you pay no tax on the interest earned); Stocks and shares ISA (a product which invests in stocks and shares or life insurance where you pay no tax on any capital growth); Investment products (e.g. stocks and shares, bonds, Unit Trust, Investment Trust or OEIC); Savings bond (with a bank, building society or life assurance company); Other (please specify) with a text input field; None of these; and Don't know. A red play button is centered at the bottom of the questionnaire area.

Source: London Economics Add-on insurance experiment 2013

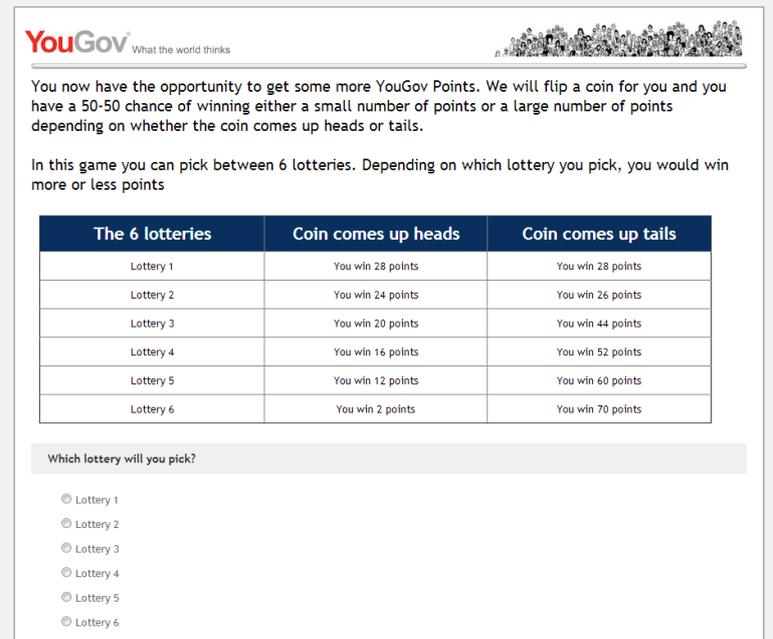
Figure 59: Financial capability



The screenshot shows a YouGov questionnaire interface. At the top left is the YouGov logo with the tagline 'What the world thinks'. At the top right is a small graphic of a crowd of people. The main question is: 'If you have £100 in a savings account and the interest rate is 5% per year, after 2 years, how much money will you have in the account?'. Below the question are three radio button options: 'Less than £110', 'Exactly £110', and 'More than £110'. A red play button is centered at the bottom of the questionnaire area.

Source: London Economics Add-on insurance experiment 2013

Figure 60: Risk aversion



YouGov What the world thinks

You now have the opportunity to get some more YouGov Points. We will flip a coin for you and you have a 50-50 chance of winning either a small number of points or a large number of points depending on whether the coin comes up heads or tails.

In this game you can pick between 6 lotteries. Depending on which lottery you pick, you would win more or less points

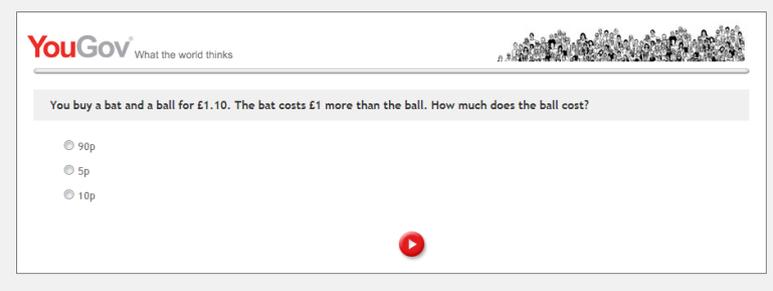
The 6 lotteries	Coin comes up heads	Coin comes up tails
Lottery 1	You win 28 points	You win 28 points
Lottery 2	You win 24 points	You win 26 points
Lottery 3	You win 20 points	You win 44 points
Lottery 4	You win 16 points	You win 52 points
Lottery 5	You win 12 points	You win 60 points
Lottery 6	You win 2 points	You win 70 points

Which lottery will you pick?

- Lottery 1
- Lottery 2
- Lottery 3
- Lottery 4
- Lottery 5
- Lottery 6

Source: London Economics Add-on insurance experiment 2013

Figure 61: Cognitive reflection



YouGov What the world thinks

You buy a bat and a ball for £1.10. The bat costs £1 more than the ball. How much does the ball cost?

- 90p
- 5p
- 10p

Source: London Economics Add-on insurance experiment 2013

Figure 62: Insurance products held

YouGov What the world thinks

Which, if any, of the following insurance products, have you purchased in the last 12 months? These can be either in your own name or jointly with someone else. Please tick all that apply.

<input type="checkbox"/> Payment protection insurance (mortgage, loan or other credit)	<input type="checkbox"/> Damage waiver / excess protection insurance (e.g. on a rental car)	<input type="checkbox"/> Legal expenses insurance - (add-on to motor or home insurance)
<input type="checkbox"/> Personal Accident (and/or sickness) covers	<input type="checkbox"/> Critical illness cover	<input type="checkbox"/> Income protection
<input type="checkbox"/> Motor insurance (car / motorcycle)	<input type="checkbox"/> Car GAP (general asset protection) insurance	<input type="checkbox"/> Card protection cover
<input type="checkbox"/> Home emergency / boiler cover	<input type="checkbox"/> Life insurance	<input type="checkbox"/> Other electronics or white goods - including extended warranties
<input type="checkbox"/> Pet insurance	<input type="checkbox"/> Car breakdown cover	<input type="checkbox"/> Home insurance - buildings and/or contents cover
<input type="checkbox"/> Mobile phone insurance	<input type="checkbox"/> Travel insurance	<input type="checkbox"/> None of the above
<input type="checkbox"/> Identity theft insurance	<input type="checkbox"/> Gadget / laptop insurance	

Source: London Economics Add-on insurance experiment 2013

Figure 63: Financial confidence

YouGov What the world thinks

Which of the following statements best describes your attitude towards personal finance?

- I am extremely knowledgeable and interested - something of an expert
- I am interested and knowledgeable, but don't consider myself an expert
- I am interested but not that knowledgeable
- I do what I have to out of necessity, but am not particularly interested
- I tend to lack confidence and interest when dealing with personal finance

Source: London Economics Add-on insurance experiment 2013

Annex 4 Regression results

Table 11: OLS regression results (part 1)

	Number of insurance offers seen	Bought first insurance offer seen	Take-up of insurance	Price paid for insurance	Overall amount spent
'Up-front add-on' treatment dummy	1.21***	-0.01	0.02	16.04***	17.79
	(0.27)	(0.03)	(0.03)	(2.54)	(32.32)
'Add-on at the POS' treatment dummy	-1.56***	0.49***	-0.03	23.46***	-9.16
	(0.22)	(0.04)	(0.03)	(3.06)	(34.82)
'Add-on at the POS + easy alternatives' treatment dummy	1.78***	-0.10***	0.14***	-3.92*	-74.75***
	(0.28)	(0.02)	(0.02)	(2.01)	(27.01)
Add-on at the POS + harder alternatives' treatment dummy	1.12***	-0.02	0.11***	0.62	-65.46***
	(0.23)	(0.02)	(0.02)	(2.04)	(25.13)
Number of insurance offers seen				-2.54***	-14.51***
				(0.23)	(4.35)
Social class	0.12	-0.00	0.00	-1.01	1.05
	(0.23)	(0.02)	(0.02)	(1.82)	(21.98)
Age	-0.01	0.00	0.00***	-0.00	0.99
	(0.01)	(0.00)	(0.00)	(0.06)	(0.81)
Income	0.00	-0.01**	-0.00	-0.14	1.17
	(0.02)	(0.00)	(0.00)	(0.23)	(2.64)
Age when finishing education	0.10	-0.01	0.01	-0.78	-3.84
	(0.07)	(0.01)	(0.01)	(0.62)	(7.64)
Male	-0.30	0.05***	-0.07***	0.92	-0.95
	(0.19)	(0.02)	(0.02)	(1.69)	(19.76)
Risk aversion	-0.05	0.00	0.01	0.47	1.90
	(0.04)	(0.00)	(0.00)	(0.42)	(5.11)
Cognitive ability	0.47**	-0.06***	-0.01	-2.58	-7.87
	(0.19)	(0.02)	(0.02)	(1.61)	(19.61)
Financial literacy	0.65***	-0.09***	-0.02	-5.91***	-21.13
	(0.24)	(0.02)	(0.02)	(2.04)	(25.39)
Constant	2.96***	0.29***	0.65***	96.06***	1,627.11***
	(0.71)	(0.07)	(0.07)	(6.23)	(77.92)

Observations	5,710	4,250	5,710	4,250	4,250
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Note: Standard errors clustered at the subject level in parentheses. *** denotes significance at the 1% level, ** significance at the 5% level and * significance at the 10% level.

Table 12: OLS regression results (part 2)

	Loss 1	Loss 2	Loss 1 >0	Loss 2 >0
'Up-front add-on' treatment dummy	10.55*** (1.80)	10.05*** (1.79)	0.13*** (0.02)	0.12*** (0.02)
'Add-on at the POS' treatment dummy	16.99*** (2.70)	4.41*** (1.64)	0.20*** (0.02)	0.04*** (0.01)
'Add-on at the POS + easy alternatives' treatment dummy	7.92*** (1.45)	4.76*** (1.24)	0.15*** (0.02)	0.08*** (0.01)
Add-on at the POS + harder alternatives' treatment dummy	9.35*** (1.28)	5.71*** (1.10)	0.15*** (0.01)	0.08*** (0.01)
Number of insurance offers seen	-0.39*** (0.15)	0.04 (0.14)	0.00 (0.00)	0.00*** (0.00)
Social class	1.61 (1.64)	1.74 (1.43)	0.01 (0.01)	0.01 (0.01)
Age	0.13** (0.05)	0.09** (0.04)	0.00*** (0.00)	0.00*** (0.00)
Income	0.02 (0.17)	0.17 (0.12)	0.00 (0.00)	0.00 (0.00)
Age when finishing education	0.51 (0.52)	0.13 (0.44)	-0.00 (0.00)	-0.00 (0.00)
Male	-0.44 (1.36)	-1.16 (1.08)	-0.03** (0.01)	-0.02** (0.01)
Risk aversion	0.08 (0.33)	0.10 (0.28)	0.00 (0.00)	0.00 (0.00)
Cognitive ability	-5.49*** (1.22)	-4.48*** (0.99)	-0.04*** (0.01)	-0.04*** (0.01)
Financial literacy	-1.76 (2.07)	-0.79 (1.47)	-0.02 (0.02)	-0.03* (0.01)
Constant	-3.98	-4.25	-0.02	-0.03

	(5.58)	(4.66)	(0.04)	(0.04)
Observations	5,710	5,710	5,710	5,710

Note: Standard errors clustered at the subject level in parentheses. *** denotes significance at the 1% level, ** significance at the 5% level and * significance at the 10% level.

