Office for Product Safety & Standards

Online Marketplaces Consumer Journeys

Research findings

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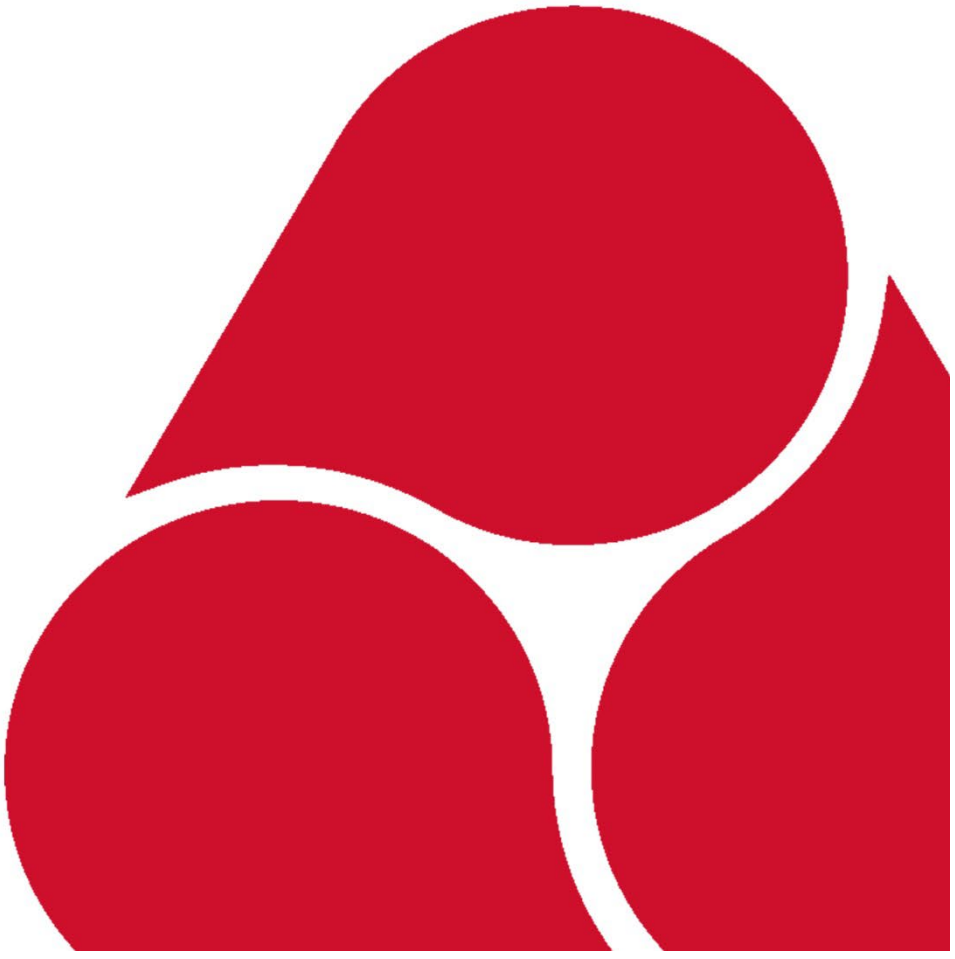

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Background

Online marketplaces are a key area of interest. Over the past 10 years, the percentage of online sales has tripled, and they now make up nearly 30% of all retail sales (Office for National Statistics, 2023). However, eCommerce has also brought new challenges and, in particular, there are concerns about the ease with which unsafe products can be sold online. An online marketplace is a digital platform or website where third-party sellers offer goods and/or services directly to consumers. The marketplace facilitates transactions between buyers and sellers but typically does not own the inventory sold.

This research aims to understand, how consumers consider product safety when shopping on online marketplaces.

Project overview

This research project consisted of two phases. Phase 1 was qualitative research on the consumer journey on online marketplaces. Phase 2 was an experiment that tested the effect of two interventions and gathered some quantitative survey data. Results across both phases indicated that participants showed little or no consideration of product safety risks on online marketplaces. Participants in both phases of the research paid limited attention to safety information on online marketplaces. Nevertheless, the results of the Phase 2 online experiment showed that it was possible to intervene and to increase awareness and knowledge of the fact that platforms do not undertake product safety checks on items sold by third party sellers on their platforms.

Results of consumer journeys on online marketplaces

In the first phase of the project, the research team conducted thirty qualitative interviews, where participants re-enacted a purchase they had made on an online marketplace, half with eye tracking. The qualitative research showed that there is a consistent consumer journey for online purchases. Whilst this varied somewhat across devices, the broad structure of the journey remained the same. Participants viewed and used different marketplace platforms in slightly different ways, but they generally understood that some–but not all–products on online marketplaces are sold by third parties. Participants typically did not know whether the platforms carry out safety checks on items sold by third party sellers, but most implicitly trusted that purchases were safe. These findings were echoed in the survey at the end of the Phase 2 experiment, where most participants were aware that products on online marketplaces may be sold by third party vendors, but they were less well informed about the extent to which the platform verified product safety checks.

However, many participants did not consider product safety at all during the re-enacted purchase journeys and there were no fixations on product safety information amongst those wearing the eye trackers. The risks that they considered on online marketplaces were typically related to product quality, with little unprompted consideration of product safety. This was consistent with Phase 2 survey findings: when asked what factors they took into account when choosing their products in the shopping task, only 33% in the control group said product safety. The most commonly selected answers were purchase price (75%) and product quality other than safety (65%).

In response to potential risks, participants tended to check the information on the product pages more carefully, especially the reviews and ratings. They looked for negative reviews, to see what could go wrong with the purchase and how a seller would respond in these cases. The importance of reviews by other consumers was confirmed in the Phase 2 survey, where the most frequently chosen answer to the question of how they verified product safety in the control condition was that they checked reviews or star ratings.

Results of experiment testing two interventions on product safety

Based on insights from Phase 1, the research team developed two interventions that aimed to prompt consumers to think about the safety of products on online marketplaces: (1) a warning message clarifying that online marketplaces do not verify the product safety checks of third party sellers on all product pages, and (2) a 'verified seller' badge that appeared next to the seller names on some products. To gather quantitative evidence of the effects of these two interventions, the research team conducted an online experiment with 3,600 participants. In the experiment, participants completed a shopping task in a simulated online marketplace where they chose which products to purchase. They shopped for three items: a pair of oven gloves, a mains-powered lamp, and a child's toy with lots of parts. At the end of the experiment, participants were asked about their confidence that the safety of the products 'purchased' in the experiment had been checked on a scale from 1 (not at all confident) to 7 (extremely confident).

Results of the online experiment showed that the warning message led to lower self-reported confidence that the safety of the products that the participants purchased had been checked. The effect was consistent across two simulated online marketplaces, one designed to evoke Amazon (estimated difference = -0.48, $p < .001$) and one Etsy (estimated difference = -0.40, $p < .001$). However, the verified seller badge did not have an effect on confidence that the safety of the products purchased had been checked (Amazon-style online marketplace: estimated difference = -0.13, $p = 0.737$; Etsy-style online marketplace: estimated difference = 0.05, $p = 1.000$).

The warning message also increased knowledge of the fact that platforms do not undertake product safety checks of items sold by third party sellers. In the control group, 60% of participants knew that some products on the simulated online marketplaces were sold by third party sellers, but this went up to 87% in the warning message conditions and 97% amongst those in that group who recalled seeing the message. Similarly, only 9% of participants in the control groups knew that online marketplaces do not verify safety checks for all products sold on their platform, but this went up to 33% in the warning message group and to 50% of those in that group who recalled seeing the message. These results suggest that warning messages may be an effective way to improve consumers' knowledge about the online platforms they shop on. However, it is worth noting that, although the message improved knowledge, it did not seem to affect which product was purchased–which may be unsurprising, given that it was shown on all products.

In contrast, the verified seller badge did not affect confidence that product safety had been checked, but it also was not well recalled. The proportion who recalled seeing the badge on the Amazon-style online marketplace was 18% and on the Etsy-style online marketplace was 30% (in contrast to the effective warning message which was recalled by 60% on the Amazon-style and 59% on the Etsy-style online marketplace respectively). Further, when participants did notice the verified seller badges, they tended to misunderstand them. The number of participants who answered wrongly, saying that the online marketplace had checked all the products was 35% in the control and 37% in the verified seller conditions, but 52% amongst the minority in the verified seller conditions who recalled seeing the badges. Similar numbers (9-12%) gave the correct answer in each condition, so this seems to be driven by participants who would have been uncertain now having a misleading sense of security in product safety. Indeed, the number of participants choosing the option “Don’t know/Can’t remember” went down from 56% in the control and 54% in the verified seller conditions, to 36% amongst those in the verified seller conditions who recalled seeing the badges. Unlike the warning message, most participants who recalled the verified seller badges said it did affect their purchasing decisions (52-53%, depending on platform). However, this did not align with their actual purchasing behaviour in the task: the products associated with the verified seller badge were selected at approximately chance-level on both platforms. In other words, whether or not a product had the verified seller badge appeared to have little impact on whether consumers purchased it.

Conclusion

Both the qualitative and quantitative parts of the project found that consumers have low awareness of product safety risk. However, interventions that clarify the extent to which online marketplaces verify product safety checks of third party sellers could increase awareness. Specifically, this project found that a warning message affected participants’ confidence that the seller had checked product safety in a simulated online shopping task. It also increased their knowledge about third party sellers and the role of the platform in product safety. However, a verified seller badge was not effective; it was normally not noticed by consumers, but when it was, it was misunderstood. Online interventions can be effective at improving knowledge and awareness of product safety. However, they need to be designed carefully to avoid inattention to them and misinterpretation.

Project overview - Seller Experiences of Online Marketplaces

This research project consisted of 30 qualitative interviews with online marketplace sellers. Woodnewton were commissioned to design and undertake the research. The sellers were recruited minimum quotas to cover variables such as gender, age, location (within the UK), frequency of selling and marketplaces used. Participants were asked about the frequency, value and type of products they sold and on which marketplaces. They were also asked about the reason why they use an online marketplace, their understanding of the rights of the consumer, and the extent to which they consider product safety issues when selling products.

Results of Sellers Experiences of Online Marketplaces

The results of the interviews found that sellers are generally motivated to provide products that are as described, and of a good quality, to avoid products being returned and receiving negative reviews. Participants were unlikely to have considered product safety

relating to their products (with the exception of sellers with higher volumes of sales) and were not aware of relevant information being provided to them by the Online Marketplace. However, were under an assumption that any information they needed would be able to be found if searched for.

Background

Online marketplaces are a key area of interest. Over the past 10 years, the percentage of online sales have tripled and they now make up nearly 30% of all retail sales. An online marketplace is a digital platform or website where third-party sellers offer goods and/or services directly to consumers. The marketplace facilitates transactions between buyers and sellers but typically does not own the inventory sold.

In particular, there has been a growth in new types of eCommerce business models, particularly online marketplaces where consumers and businesses can buy products from third parties. This growth of eCommerce has enabled greater consumer choice and convenience and created valuable opportunities for many businesses. However, eCommerce has also brought new challenges and, in particular, there are concerns with the ease with which unsafe products can be sold online.

To understand to what extent such policy interventions could be effective. This research aims to understand how consumers consider product safety when shopping on online marketplaces and what interventions may have a potential impact on this.

Aims and objectives

The research forms a key part of OPSS' evidence on online marketplaces and addresses a gap that has been identified. By understanding the extent to which different interventions impact purchase decisions on online marketplaces, it will help OPSS to develop the strategy on online marketplaces and consumer-focused campaigns.

This research addressed two key research questions:

1. What information do consumers pay attention to when purchasing a product on an online marketplace and how does it impact their decision-making process?
2. To what extent do potential safety interventions impact the purchase process?

Overview of project process

The project was run across two phases. The first phase interviewed 30 consumers as they re-enacted a recent purchase that they had made on an online marketplace in the last 30 days. This qualitative phase provided an understanding of how consumers shopped using online marketplaces–what information did they look for / notice, and how aware they were of the origins of the product. The second phase of the research drew on findings from the first phase to develop two interventions that aimed to prompt consumers to consider product safety when shopping on online marketplaces. They were tested in an online experiment, with 3,600 participants who had recently purchased from at least one online marketplace. Confidence that the safety of the products purchased had been checked, attention to the interventions, knowledge about product safety, and attitudes towards shopping on online marketplaces were measured in a post-intervention survey.

Table 1 below contains a summary of the project process and an overview of methodology and sample. Additional detail on methodology and sample can be found in the corresponding sections of the report and in the annexes.

Table 1. Overview of the project methodology

Phase	Research stage	Method

Phase 1	Rapid evidence assessment (REA)[1]	• Reviewed 18 papers that were identified from the search process as relevant to the two questions
		  • how to best draw attention and communicate information (in terms of presentation and placement)
		  • what affects consumers' perception of product safety risks and purchase decisions
		• Key information and findings extracted from the 18 papers and insights summarised
		• Results of REA informed the creation of a long list of ideas for pre-testing stimulus in qualitative interviews

Phase 1	Qualitative interviews with recent users of online marketplaces	• 30x 45-minute qualitative interviews conducted Nov-Dec 2022
		  • 15x interviews conducted face-to-face with eye-tracking technology
		  • 15x interviews conducted remotely via Zoom
		• All participants had purchased a product in one of four specified categories (toys, electricals, clothing, furniture) from a third party seller on an online marketplace in the last 30 days
		• In the interview, participants were observed while re-enacting their recent purchase from an online marketplace
		• Follow-up interview questions then explored the decision-making process at each stage of the purchase journey
		• Interviews also included pre-testing of safety messages developed from the REA findings for potential inclusion in the online experiment

Transition	Experiment design workshop	• Presented Phase 1 findings • Presented basic set-up of the online experiment with the simulated online marketplace environment • Proposed four options for the online experiment based on the level in the decision process to be targeted, including attention, awareness, knowledge, and decisions

[1] Note on chronology: this stage was conducted before qualitative interviews, but for clarity the REA findings are included at the start of the section 'Safety Message Pre-testing and Intervention Design' on page 20 onwards.

		• Each option contained a set of research questions, potential interventions, and outcome variables, that were interconnected with each other • Discussed the options with OPSS, to decide on the design of the experiment

Phase 2	Online experiment	• Conducted an online randomised control trial between 28th February and 10th March 2023, with a sample of 3,600 participants from the Kantar Profiles panel
		• Applied quotas on age, gender, region and ethnicity, using targets based on OPSS's data on consumers who had recently purchased from at least one online marketplace
		• Participants were randomly assigned to one of the three conditions:
		  • No intervention
		  • Warning message intervention
		  • Verified seller badge intervention
		• Participants completed a shopping task in one of the two online marketplaces, simulated based on Amazon Marketplace and Etsy, after which they completed a short post-intervention survey with questions measuring the primary outcome, secondary outcomes, and demographics
		• Performed statistical analyses to test six hypotheses and reported descriptives of the secondary outcomes

Consumer Journeys on Online Marketplaces

This research set out to understand consumer journeys on online marketplaces, to establish the context and the opportunities for potential interventions. This section details findings from qualitative interviews with 30 consumers[2] who had made a purchase from an online marketplace in the previous 30 days, across a range of product categories and marketplaces. Consumers were asked to recreate, as closely as possible, the online purchase made in the last 30 days while observed by a moderator from the research team. After this recreation, consumers discussed the rationale behind each decision made in the recreated purchase journeys, followed by a broad discussion of previous purchases made from online marketplaces.

These interviews provided an understanding of how consumers shopped using online marketplaces, including what information they look for and notice, and the extent to which product safety is a consideration throughout purchase journeys. These interviews also included pre-testing of potential safety messages; these findings are detailed in later sections of this report.

Consistent themes across purchase journeys

Although there were considerable differences and nuances across the range of purchase journeys observed (which are discussed later in this section), most journeys featured a series of consistent themes and stages. These can be condensed into a 'typical' journey structure for making an online purchase:

- **Preliminary stage:** Consumers typically had some idea of the type of product they wished to buy, some of its attributes and an approximate price range before starting the search. Many journeys featured some element of research before arriving at the platform, such as reading review articles or watching reviews or usage videos on YouTube.
- **Initial search:** On arrival at the online marketplace, the typical first step taken was to conduct a search using a generic search term for the type of product wanted to get an idea of the variety of products available on the platform and typical price ranges. Consumers often reported using filters (e.g., a minimum average star rating) as an easy and effective way of narrowing down this search from the outset.
- **Rapid shortlisting:** Due to the perceived huge volume of products available in most categories on online marketplaces, consumers described the need for 'strategies' to quickly narrow down choices to a manageable number of products to consider. This stage involved quickly narrowing down choices to a few appealing options from the search results pages. This was typically done at rapid speed, using **price, star rating** and the **appeal of the first picture** as the key criteria. Little consideration was typically paid to seller information at this point.

[2] Throughout this section 'consumers' refers to participants who took part in qualitative research.

- **Detailed consideration:** Once shortlisting had refined the search to a few options, consumers typically opened dedicated product pages to review these in detail. At this point, **pictures of the product, product descriptions,** and **reviews** were used (in combination with **price**) to narrow down products further to one 'frontrunner'.
- Focus on one **frontrunner** option: by the time at which one 'favourite' product had been selected to purchase, consumers made final considerations and checks to gain confidence in this choice (some consumers described this as looking for reasons 'not to buy'). At this point, **delivery information** (covering both expected delivery time, and delivery cost where relevant) and **seller details** were considered. Although product safety was rarely considered (as discussed below), if it was considered then that typically happened at this stage.
- At this point, if the consumer was satisfied with each of these considerations the journey would move on to checkout and purchasing the product. If any of these considerations presented a concern, consumers moved back to earlier in the shortlisting phase and in some cases repeated the process with different search parameters.
- Consumers did not typically consider **product safety** at all during purchase journeys. When **product safety** was considered, this happened late in the process at a stage where consumers had already considered other criteria and selected this as an appealing option. This created the risk that product safety concerns could be dismissed or rationalised away, as consumers already viewed the product they had selected favourably.

Attention paid to on-screen elements during purchase journeys

Eye-tracking was used to measure attention paid to key elements of the purchase journey throughout fifteen of the purchase journey re-enactments conducted within qualitative interviews. The eye-tracking glasses measured the number and duration of 'visual fixations' across a purchase journey. Visual fixations are events where the person in question focuses their gaze on an area (in this case, a specific area of the screen during the online purchase journey) for long enough to ensure the visual system has had time to take in detailed information on what is being looked at, which is used as a signifier for attention paid.

Aggregating purchase journeys to find consistent themes

The fifteen purchase journeys differed in terms of type of device and online marketplace used, as well as other differences such as the individual settings of devices. Due to the limited number of journeys measured with eye-tracking, results presented here are aggregated to highlight overall trends. To allow for comparisons across purchase journeys, 'areas of interest' were categorised and then used to measure where attention was paid.

The areas of interest used for eye-tracking analysis were:

- 'Other products' (combined pictures and product descriptions of other products considered in the purchase journey, as these were not always possible to separate)
- The chosen product's picture
- The chosen product's description
- Written reviews

- Seller information
- Delivery information
- Price
- Star rating
- Safety information (for example, warnings that products such as toys were unsuitable for children below a certain age, or highlighting items such as candles as flammable).

A generic template was created to visualise these areas of interest.

Attention paid to key areas of interest

The table below describes the share of total time for measured fixations during the re-enacted purchase journey. Fixations can be considered a signifier for consumers paying attention to a specific area of interest. For example, in the case of “Other Products”, 42.97% of the total time **where a fixation was identified** across the 15 eye-tracking interviews was attributed to the consumer paying attention to this area. This means that times when consumers were not fixated on any specific part of the screen, such as when scrolling at speed or looking away, were excluded.

Table 2. Summary table of attention paid to key elements during purchase journeys.

Area of interest	Share of total fixation time (%)	Number of journeys with fixations
Other products	42.97	15/15
Picture of chosen product	15.63	15/15
Product description	14.10	15/15
Written reviews	7.13	7/15
Seller information	5.31	10/15
Delivery information	3.94	13/15
Price	3.28	15/15
Star rating	1.23	11/15
Safety information	0.00	0/15

Attention paid to key elements during purchase journeys

Looking at **other products** (prior to making a final choice) accounted for more time than any other component (43% of total fixation time). This highlights the importance within journeys of considering many products, but quickly arriving at a shortlist, before 2-3 “main” candidates were chosen to consider in detail.

After this, most time was spent on the **picture** (16% of total fixation time) and **written descriptions** (14%) of the **chosen product**. Building on these findings, qualitative interviews highlighted how the relative importance consumers placed on pictures versus written descriptions varied by the purchase type. For example, pictures were described as relatively more important for clothing/apparel and toy categories, while written descriptions were relatively more important for electricals purchases.

Fixations on **written reviews** were identified in only 7 out of 15 journeys, but these still accounted for a higher proportion of the total fixation time than any other area except the three areas of product information detailed above. Across the 30 interviews conducted (including 15 without eye-tracking), most consumers considered written reviews to be highly important, although with different levels of relevance depending on the product being purchased (for example, purchases of high-end electrical items such as an electric hand massager featured more extensive reading of reviews than cheaper items in the same category, such as mobile chargers). Combining eye-tracking with feedback from the interviews suggested that use of **written reviews** varied more according to the type of purchase being made than other elements.

There were fixations on **seller information** in 10 out of 15 journeys, but overall these accounted for relatively low fixation time (5.31% of total).

Fixations on **price** were seen in every journey (15/15), and fixations on **delivery information** were seen in 13 out of 15 journeys. Fixation times were relatively short for these areas of interest, although they were both described as highly important considerations in qualitative interviews. A possible explanation for this—although not one that was voiced directly by consumers—is that this information is relatively quick and easy to take in and move on from. Qualitative interviews and observations also showed that **price** was considered very early in the purchasing journey and then used to contextualise the rest of the process, whereas **delivery information** was considered at a later point during the detailed shortlisting.

Fixations on **star ratings** were seen in 11 out of 15 journeys, but only took up 1% of the total fixation time. Observations in qualitative interviews showed that star ratings were often used as a filtering criterion. For example, consumers might filter out all products under 4 stars to narrow their choice, but then pay little attention to ratings beyond this.

There were no identified fixations (attention paid for long enough to process) on **product safety information**, despite some form of safety information being visible on-screen in 13 out of the 15 journeys re-enacted with eye tracking**.** Due to the relatively low prominence of product safety information, the eye-tracking analysis may not have had enough granularity to pick up instances in which this information was looked at. However, qualitative interviews reinforced the view that there is little engagement with this information. This finding underlines that product safety information lacks salience during the consumer journey, compared to other types of information.

Differences across purchase journeys

Effect of device on journey type

To understand potential differences across consumer journeys by type of device, re-enactments of purchase journeys were conducted on a range of devices (mobile phones, tablets, and laptops). Qualitative participants were recruited based on the device they had originally used for their online purchase and asked to use this device in the re-enactment to increase validity. Comparison of journeys across device type revealed some differences within a broadly consistent structure.

The standard desktop display on online marketplaces was constrained by a reduction in screen size on mobile, leading to a reordering of key page elements. Consequently, consumers' purchase journeys differed in two key aspects. The first was a greater reliance and attention on images relative to product descriptions during the initial search. The second was a faster shortlisting process, due to a lesser ability to scan multiple products at once on the search results page. In contrast, the larger screen size on tablets and laptops allowed consumers to consider a larger number of products at a glance during the initial search phase, before moving into the detailed review of specific pages to shortlist.

Despite these differences, the overall structure of purchase journeys was not significantly different across devices. Consumers started with broad search parameters and rapidly narrowed their search down to a few selected products to consider in depth, with the same key considerations for choosing and rejecting products used regardless of device. Differences between individual consumers' habits and attitudes, detailed in the next section, accounted for greater differences than device type.

This insight contributed to the decision not to treat users with different devices as separate arms of the experiment, as described in the Trial Protocol in Annex 1.

High-investment versus low-investment purchase journeys

Within the consistent journey structures outlined above, there was also variation across purchase journeys according to the product type and context for purchase. Purchase journeys could be categorised into higher- and lower-investment journeys, with investment referring here to the amount of time, attention, and effort invested in the process rather than purely to cost.

Factors influencing the level of investment in purchase journeys included:

- **Perceived product risk**: Most journeys involved categories and products that were perceived as low risk with minimal cause for safety concerns. A minority of purchases were perceived as high-risk products (examples from qualitative research included an electric chainsaw and toys for under 5s) and in these cases safety was considered in-depth, increasing the level of investment.
- **Cost:** Cheaper purchases were less likely to be considered in as much detail because they were considered easily replaceable, whereas purchases considered more expensive involved more careful attention. The threshold for what was considered expensive varied across categories, but several consumers described mental thresholds around certain amounts. So, for example, purchases under £10 were considered relatively low-investment, those between £10 and £50 were felt to require more consideration, and those over £50 were felt to require more considerable investment in terms of time and research to ensure full confidence in the decision to purchase.

- **Repeat vs new purchases:** Purchases made on regular basis were described by consumers as being carried out on 'autopilot' in the context of pre-established trust, whereas greater consideration was felt to be required for more novel or unfamiliar purchases.
- **Gifts:** Products bought for others were generally reported to involve more time and greater consideration than products bought for the purchaser. Where product risk was considered, there was a greater consideration of any risks that might endanger the recipient as they are unable to make their own informed decision. This emerged as a particular theme in purchases in the toys category.
- **Functional vs emotional significance:** Purchases made to fill a simple, functional need involved lower investment than purchases considered to have more emotional or 'personal' significance, such as clothing or furniture.

Typologies of different purchase journeys

Four typologies of purchase journey emerged from the qualitative observations, based around a spectrum from lowest to highest investment.

Highest-investment purchases: These purchases featured products involving a known and specific perceived safety risk, or items with high emotional significance and a higher cost. Purchase journeys were likely to feature careful consideration and research before coming to the online marketplace, with a longer and more thorough process of searching (with a higher likelihood of searching through multiple pages of search results to find potential products, whereas lowest-investment purchases rarely searched further than the first page of results), shortlisting, and reviewing product details. These journeys were most likely to feature a detailed exploration of written reviews, which could involve seeking out negative reviews to get a sense of what might happen if something goes wrong. If purchasing from a third party seller, consumers were more likely to investigate the seller in depth, using seller reviews, reviews for their other products or information provided about their delivery & return policies for example.

- Safety considerations for highest-investment purchases: Consumers reported being more likely to seek out specific safety information provided by the seller, although this behaviour was still inconsistent across purchases (and was not observed in any of the interviews with eye-tracking).
- Example purchases: high-end electricals, clothing for special occasions, toys for small children (presenting a choking risk).

Medium-to-high investment purchases: These purchases featured items with some level of emotional significance, such as smaller gifted items or personal purchases, that typically featured some limited risk or potential to 'go wrong'. Journeys featured some in-depth consideration, and potentially some research elsewhere before coming to the marketplace. During the short-listing process, several items on the shortlist were considered in detail. These purchases were also likely to involve reading a range of written reviews, although in less depth than for highest-investment purchases.

- Safety considerations in these purchases: There were generally minimal concerns related to product safety. However, product safety sometimes surfaced as an issue when consumers looked into the third party seller in depth by exploring seller reviews or reviews for their other products.
- Example purchases: Homeware, smaller furniture, clothing, gift bundles including cosmetics.

Low-to-medium investment purchases: These purchases featured functional and/or lower-cost items without any perceived inherent risk, but still requiring a degree of consideration. Journeys were likely to feature a fast search and shortlisting process, without detailed consideration of many products, with consumers unlikely to read more than one or two product descriptions. Consumers' reported aim for this type of purchase was generally not to make the "perfect" purchase, but one that satisfies functional requirements with a minimum of effort and risk. The key distinction between these and the lowest-investment purchases was whether the product in question was a "new" or repeat purchase.

- Safety considerations in these purchases: Consideration of product safety was typically very minimal or completely absent. Reviews (generally star ratings, and possibly a quick scan of written reviews) were generally seen as sufficient to establish trust in the product and seller.
- Example purchases: Clothing basics, cheap electricals such as chargers.

Lowest investment purchases: These purchases typically featured repeat purchases of items perceived to be purely functional, generally low-cost, and with little or no perceived risk. These purchases were likely to be much simpler than the journey structure outlined earlier in this section and could sometimes be as simple as clicking "buy again" at a suggestion from the platform (particularly from Amazon marketplace). Within these journeys, consumers compared different sellers of the same product if there were price differences, but there was perceived to be little need for detailed consideration of the product or seller.

- Safety considerations were absent in these purchases.
- Example purchases: Replacement small homeware items, replacement everyday cosmetics.

Differences by platform

Consumers saw key differences between the online marketplaces included in this research. Although they were recruited on the basis of one recent purchase from a specific platform, most had experience of purchasing items from multiple platforms and could therefore compare their experiences across platforms. The exact structure of purchase journeys and attitudes to third party sellers varied across the different marketplaces.

Amazon

Consumers saw Amazon as the largest and most diverse (in terms of products available) platform. Amazon was seen by consumers to minimise or even hide the details of third party sellers, giving the brand a much more prominent role in each transaction than other marketplaces. This minimised the influence of third party sellers on purchase decisions, as long as basic criteria such as price and delivery time were comparable across sellers. The size and 'fame' of Amazon was also seen by consumers as giving a strong halo effect of trust towards products purchased here. As an example of this, when prompted to consider the role of online marketplaces in ensuring or verifying product safety (detailed in the next section), regular Amazon users were more surprised than users of other platforms that the platform takes no specific responsibility for verification.

AliExpress was only familiar to a small number of consumers in the research but was felt to be equivalent to Amazon in the range available and the relative prominence of the platform over the third party seller in question.

Etsy

Consumers saw Etsy as a highly distinctive online marketplace, with some unique characteristics separating it from Amazon, eBay and others. Purchases made on Etsy were felt to be much more “personal” and to involve a direct relationship with the seller, which consumers perceived of as placing the marketplace itself in a background role. Because of this, trust in individual sellers was felt to be much more important on Etsy than on other platforms, requiring a higher degree of attention paid and research done into the seller. In the qualitative sample, consumers described purchases made from Etsy as more likely to be personal with more emotional significance, and more likely to be gifts, therefore increasing the level of investment in purchases made.

eBay

Consumers saw eBay broadly as a mid-point between Amazon and Etsy on the above considerations, but with a higher variation in how it was seen by different consumers. Some felt that, as a platform, eBay can be more difficult to navigate and that it is more difficult to find key information than other marketplaces.

Existing Attitudes towards Product Safety

The 30 qualitative interviews also explored consumers' pre-existing attitudes towards risk on online purchases and product safety. Consumers were not primed to consider safety as they re-enacted their purchase journeys: references to considerations of safety and risk were allowed to surface naturally in the guided re-enactments, to provide an understanding of how much these were genuine factors in purchase decisions. Interviews then discussed consumers' attitudes to risk and product safety in more detail. Findings in this section are drawn from observations and guided discussions across the 30 interviews.

Understanding of online marketplaces and third party sellers

Understanding of online marketplaces and third party sellers varied considerably across the qualitative sample. Most consumers had a clear understanding that some products on marketplaces are sold by third party sellers. However, a minority had the impression, for example, that anything purchased from Amazon was "just from Amazon" and had little or no understanding of the role of third party sellers.

Most consumers had not considered the responsibility of marketplaces in verifying product safety prior to being prompted in qualitative interviews. However, when prompted most assumed that marketplaces must have some responsibility for verifying product safety.

Survey questions after the experiment, detailed in the trial results section, support the finding that awareness of third party sellers was generally high, but that there were gaps around understanding the implications of this, including in relation to what safety checks were undertaken or verified.

Perceived risk on online marketplaces

The level of perceived risk experienced by an individual when using an online marketplace was influenced by their familiarity and experience with marketplaces. Each participants' level of experience was determined by their answers to pre-recruitment screening question about their recent purchase history (more detail is included in Annex 2 – Qualitative sample & stimulus), and by answers to interview questions around their experience with each platform. The least experienced and most experienced consumers tended to be the most cautious, the former due to less comfort and familiarity, and the latter due to the likelihood of having had a purchase go "wrong" in some way in the past. The majority of consumers who had some but not extensive experience tended to be less cautious and more trusting than either of these groups.

Consumers broadly accepted that shopping online (in third party marketplaces and directly from retailers) cannot be completely "risk free" and accepted risk as a trade-off for convenience and price. However, within this, there was broad variation in willingness to take risks according to a specific individual's attitudes, as well as types of products purchased.

Before being prompted about product safety, consumers spontaneously considered "safety" on online marketplaces in terms of: financial security, the reliability of a seller and their consumer rights (e.g., will the product arrive at all, will it arrive as advertised, will consumers be able to return items if needed–the latter being a key way to mitigate the inherent uncertainty of purchasing a product online, without seeing/touching it in person

first). Reliability, quality, and the potential ease/difficulty of returning a faulty item were therefore considered much more carefully than product-specific safety issues such as flammability, choking hazards or toxicity. As in the Consumer Attitudes to Product Safety work conducted by Kantar Public (OPSS, 2020), product safety was typically assumed as a given.

A small minority did consider product safety in more depth, particularly for purchases they considered “higher risk”, and/or if they had direct personal experience of faulty items themselves such as electrical items purchased from a third party marketplace which had proved faulty and dangerous. Outside of these specific cases, very few consumers had searched specifically for product safety information when making their purchase, often rationalising this information as either not relevant, or unable to give them full confidence anyway (i.e., if they saw it as impossible to be completely confident certain products ‘felt’ safe from online descriptions, so the key priority was ensuring a purchase could be returned easily if it did not ‘feel safe’ on arrival).

Heuristics for product safety

The re-enacted purchase journeys conducted as part of the qualitative research featured very limited consideration of safety information provided by the seller or the platform. However, where safety considerations were felt to be relevant consumers did still seek reassurance that the product was likely to be safe. Some of the steps taken in the online purchase journey were not **directly** related to verifying product safety but were used by consumers as heuristics for a reasonable level of confidence. Product reviews were used for this purchase, including the deliberate seeking out of negative reviews. Consumers used negative written reviews to gain an understanding of “what could go wrong” with a purchase, and to identify how the seller addressed complaints or problems with purchases. This was done to ascertain a general sense of the risk of purchasing from a particular seller, not explicitly to spotlight safety issues, but consumers were confident that this technique would surface product safety issues, if there had been any.

Reading feedback on specific sellers was also seen as important and used for related reasons, particularly on platforms where the seller was perceived by consumers as being more prominent, such as Etsy and eBay.

Some consumers also described using their own judgement to assess safety by reviewing pictures in depth. Even if not explicitly looking for product safety risks, these consumers were confident that anything dangerous would be visible (e.g., looking at pictures of toys to ascertain if they looked safe for the intended age).

Safety Message Pre-testing and Intervention Design

Ideation of pre-testing

The content of warning messages may influence their effectiveness, as may the point where they appear in the purchasing journey, their placement on the page, and the way they are presented. Therefore, the research team conducted a rapid evidence assessment (REA) to inform the messages to pre-test in the 30x qualitative interviews before testing messages in the online experiment (see Appendix 3 for details of the rapid evidence assessment). The REA was conducted to seek evidence about (1) how best to draw attention and communicate information (in terms of presentation and placement), and (2) what affects consumers' perception of product safety risks and purchase decisions. This review found that there were many different ideas that had been tested in the literature, but often in a very specific context, making it hard to compare them or give any definitive answer to the questions.

Previous studies have found that messages are potentially effective on the search page, product page and checkout page. However, the papers did not compare what happened when the same intervention was put in different places, meaning there was no evidence about which was most effective.

Similarly, the studies highlighted several salient places on the product pages, including top of the page (above the product image), alongside the product description, alongside the purchase information such as price and delivery, and alongside the additional product information (e.g., technical details). Still, they did not tend to compare the effectiveness of different placements. This highlighted the need to explore a variety of different placements for safety messages in the qualitative pre-testing. The research team developed and presented mock-ups with screenshots of real-life online marketplaces to explore a variety of different placements with qualitative respondents.

The REA also found evidence of effectiveness for many different ways of presenting information in order to attract attention online, including using banners, badges, pop-ups, textboxes, and checkboxes. During the pre-testing stage, the research team also explored the options of using a pop-up message that appeared when clicking the 'purchase now' or 'buy now' button (before moving on to the checkout page) and a checkbox on the checkout page.

In addition, the findings provided ideas for the content of the messages, including evoking emotion, empowering consumers with a call to action, making seller information more salient, directing consumers to external signals, providing information via stories and so on. OPSS and Kantar Public worked closely to consider policy context and practical constraints, and eventually selected four options of message content for the pre-testing stage.

The REA resulted in a long list of potential stimuli, based on all these ideas, with a focus on product safety risks on online marketplaces. OPSS and Kantar Public identified which options for stimuli would be most appropriate in this context, in order to decide what to include in the pre-testing. See Appendix 3 for details of the REA and summary of findings of papers reviewed.

Pre-testing interventions

As detailed above, the REA produced a range of potential approaches for interventions to increase consumers' consideration of safety when purchasing from online marketplaces. These findings were used to develop potential intervention ideas, covering a range of different message content and message placement, to test in the qualitative interviews (the full list of qualitative stimulus is included in Annex 2).

In total, four different safety messages (shown as text only, rather than in-situ mock-ups) and four different possible locations for message placement were explored in the interviews, after consumers had re-enacted their purchase journey.

Pre-testing message content

Overall, the message with the strongest potential impact varied hugely and depended on the desired outcome. Product-specific messages were seen as most useful and impactful if directly relevant to the product, but can easily be seen as frustrating or patronising if applied to a product where the message is not intuitive.

Message 1: A product-specific message (rotated according to relevance for their purchase) such as "This product is flammable. Please make sure you check the warnings and instructions that come with the product."

If directly relevant to the product, this message was seen as the clearest, as the warning is direct and tangible in a way that a general message (such as "high-risk") is not.

However, if not directly relevant or if perceived as "obvious" (e.g., for some clothing or furnishings), this message was sometimes seen as "patronising" and easy to dismiss or ignore.

Consumers did appreciate the reference to checking warnings and instructions but felt that this reminder was likely to be forgotten by the time the product arrived.

Message 2: "This product is sold by a third party seller based outside the UK."

This message was generally seen as a useful warning of potential delivery delays and/or difficulties returning a faulty item but was typically not related to product safety. Without additional safety references this message was therefore felt to lack specificity.

While willingness to buy from overseas was mixed, many consumers found this off-putting enough to automatically avoid making this purchase if comparable products were available from UK sellers, given concerns about delivery times or recourse in the case of issues.

Message 3: "This product is sold by a third party seller. Any product safety checks that this product has undergone have not been verified by [Amazon/eBay/Etsy]."

This message typically had strong, knee-jerk reactions, causing the most concern/alarm of any message tested. At first, particularly when read at speed (as most consumers claimed to do when encountering this type of message in these environments), the message was interpreted to mean that no 'proper' checks had been carried out. After reflection and discussion though, the message was usually considered less alarming.

Beyond this, for some consumers this message was felt to damage confidence in the online platform in question whereas other consumers saw it as useful transparency. Some consumers were also concerned that this message implies that the platform will not help them in any dispute with sellers, placing all onus on the individual making the purchase. (This message was also tested as a checkbox option, detailed below.)

Message 4: “This product is in a high-risk category. To learn more about product safety, visit [gov.uk advice]”

This was the most divisive message shown, with considerable variation in terms of impact and appeal. Generally, “high-risk category” was (mis)understood to refer to the product itself being flagged as high-risk rather than the category (i.e., all electricals, all toys) itself.

The external link to the gov.uk website was generally seen as useful to have if needed, but most consumers felt that they were unlikely to disrupt a purchase journey to seek out information here.

Pre-testing message placement

There was more consistency on where in the purchase journey consumers felt safety messages would be likely to be noticed and have most impact. The ideal placement for safety information was felt to be a prominent display on the main product page, ideally near images of the product.

Placement 1 - Search results pages: These were felt to be too soon in the journey for a safety message to have impact. At this point, consumers were rapidly sorting through huge amounts of information, relying predominantly on images and price to arrive at a shortlist as soon as possible. Consumers felt that safety messages would be lost or ignored here.

Placement 2 - The specific product page: Consumers felt that they would be more likely to engage with messages here, as it would ensure that information is available before they feel committed to an individual product. It was felt that safety messages should appear as prominently as possible at the top of the page or around images. Placement around the seller and delivery information, and near to the purchase button, were also considered by consumers to be ideal locations for safety messages on this page.

Placement 3 - Re-affirming messages later in the purchase journey (e.g., checkout page): Messages at this stage were broadly seen as a useful addition to messages earlier in the journey, but not sufficient alone. Showing safety messages ‘too late’ in the journey risks frustrating consumers who already feel committed to the purchase and now need to start again, or risks being ignored as considerable time and effort has already been involved getting to this point (sunk costs).

Placement 4 - A final checkbox intervention: The idea of messaging in a final checkbox was broadly welcomed and seen as useful to ensure that consumers have actively taken in safety messages. However, there were two potential concerns with this idea. Some consumers questioned whether this kind of approach effectively absolves the platform if anything goes wrong (i.e., cannot appeal to them for help if needed). Others felt that if they encountered this on every third party purchase, then they would start to check the box automatically and without consideration (comparisons were made to opting out of marketing emails).

Intervention design

Based on the insights from the qualitative interviews (including eye-tracking and pre-testing), OPSS and Kantar Public conducted an experiment design workshop to discuss various options for the online randomised control trial that would gather quantitative evidence about effects of selected interventions. Overall, the interventions were designed to increase the transparency and availability of information, so that consumers can make better informed decisions, while at the same time being sufficiently flexible to implement and simple to follow.

Phase 1 highlighted the potential for an effective intervention that clarifies the role of the platforms for consumers regarding safety checks, specifically around products sold by third party sellers. Qualitative interviews in Phase 1 revealed that consumers reacted strongly to the message "*Any product safety checks that this product has undergone have not been verified by [Amazon/eBay/Etsy/AliExpress/Wish?].*". Although few consumers had considered this issue in any depth before, consumers tended to assume that platforms would take some responsibility for regulating the sellers and products on the marketplaces. In reality, these particular online marketplaces had not verified the safety checks done by third party sellers. This misconception about the online marketplace's involvement with respect to product safety is consistent with the responses to OPSS's call for evidence, in which stakeholders raised concerns about the ambiguity of the role of the marketplace or platform (Office for Product Safety and Standards, 2021).

Findings from qualitative interviews revealed that the assumption that responsibility for product safety is taken by the platform was particularly high for Amazon. Consumers were more likely to feel they were making a purchase "from Amazon" without giving much consideration to the third party seller on the platform, due to the brand's dominance as an online retailer, and how Amazon was seen by consumers as "foregrounding" its own brand and downplaying the prominence of third party sellers on the platform. The results of Phase 1, as well as OPSS's call for evidence, revealed that many consumers were unaware of the distinction between Amazon and Amazon Marketplace (Office for Product Safety and Standards, 2021). Therefore, an intervention that highlights what has not been done by the online marketplaces to verify the safety of products sold by third party sellers on their platforms would be expected to raise consumers' awareness of potential product safety risks.

The second intervention chosen to include in the experiment was the effect of a "verified seller" system. Social media platforms like Twitter and Facebook have used a verified account system for many years, which has proved to be successful and popular amongst their customers. The experiment presented an interesting opportunity to explore the effect of a similar check mark in the online marketplace context. The verified seller badge would allow consumers to be more confident in third party sellers who have done safety checks, while the absence of a badge for other sellers would highlight potential risks to consumers.

Furthermore, an intervention in this area could potentially draw more attention to the role of third party sellers and encourage consumers to examine seller information in more detail. The interviews in Phase 1 suggested that while consumers were more hesitant to buy from an overseas seller, this was mainly due to concerns about a longer delivery time and potential difficulty regarding returns. Consumers did not consider the potential for product safety issues or that they might have more limited recourse against third party sellers based outside the UK in respect of such issues. Although the verified seller badge does not directly address the issue of seller location, it might encourage consumers to examine the seller information more carefully when they do not see a verified seller badge.

The trial was designed to examine the effects of these two interventions on two different types of online marketplaces. The results of Phase 1 suggested that consumers engaged with different online marketplaces differently, with Amazon Marketplace on one end of the spectrum and Etsy on the other. In terms of the website design, information about the third party seller was seen by consumers as playing a more prominent role on the product pages at platforms like Etsy and eBay, whereas there is little information about the third party seller on product pages at platforms like Amazon. As a result, consumers usually

spent more time and effort researching and interacting with the third party seller on platforms like Etsy and eBay. On platforms like Amazon, it was harder for consumers to distinguish when a product was sold by a third party seller or by Amazon's retail entity, and they relied more on their trust of the platform. There was a strong halo effect on trust in the platform, given its size and fame. These differences have direct implications for how consumers perceive third party sellers and their concerns about product safety, suggesting that the same intervention might have different effects across platforms. Therefore, the experiment was designed to simulate two types of online marketplaces on the two ends of the spectrum of consumer journey, to examine whether and how the results differ depending on the type of online marketplace.

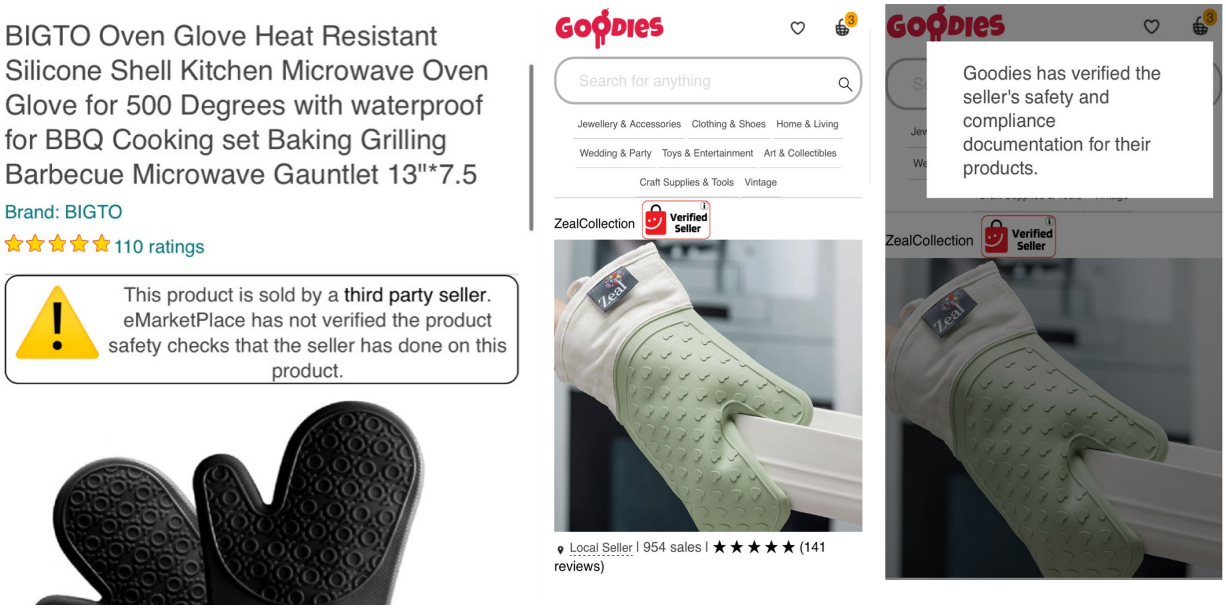
Testing the interventions

Aims and methods overview

Phase 2 comprised an online experiment to test the effect of two interventions aiming to prompt consumers to think about the safety of products on online marketplaces. The interventions were (see Figure 1):

- A warning message stating that “This product is sold by a third party seller. {platform name} has not verified the product safety checks that the seller has done on this product.”
- A ‘verified seller’ badge appeared next to the seller names, which could be clicked to see a pop-up stating “{platform name} has verified the seller's safety and compliance documentation for their products.”

Figure 1. Screenshots of the two interventions in the experiment



(a) Warning message

(b) Verified seller badge

The experiment began with a shopping task in a simulated online marketplace, followed by a short post-intervention survey. The primary measure of interest was participants’ self-reported confidence that the safety of the product that they purchased in the experiment had been checked.

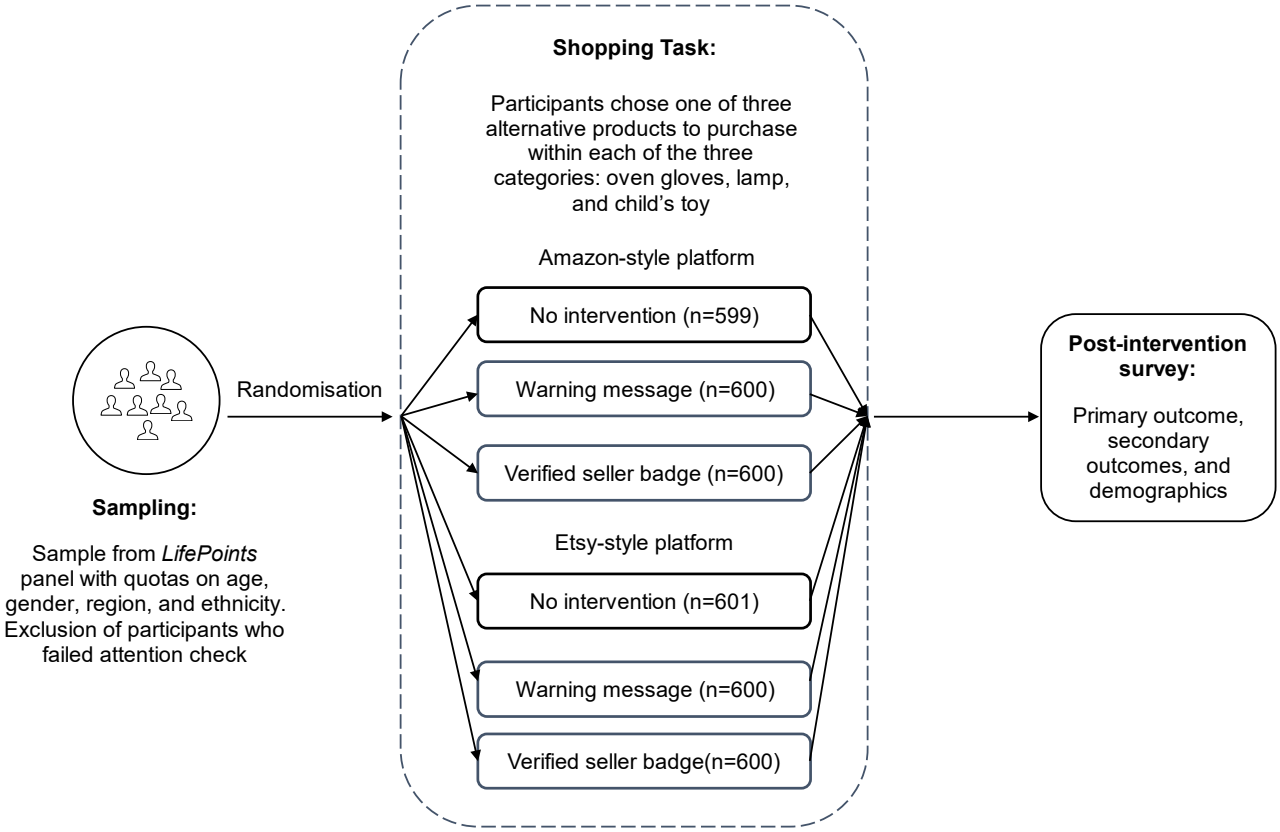
To ensure the results were generalisable across different real-world online marketplaces, two alternative simulated platforms were developed, one based on Amazon and one based on Etsy. The experiment design tested the same interventions on each platform and tested whether the effects of those interventions differed between platforms. This gave six groups, to which participants were allocated at random:

1. Amazon-style platform with no intervention (the ‘control’ or ‘status-quo’)
2. Amazon-style platform with the warning message
3. Amazon-style platform with the verified seller badge

4. Etsy-style platform with no intervention (the 'control' or 'status-quo')
5. Etsy-style platform with the warning message
6. Etsy-style platform with the verified seller badge

See Figure 2 for the trial flow. Full details of the data collection and analysis methods used can be found in the trial protocol in Annex 1.[3]

Figure 2. Trial flow chart



Hypotheses

The experiment aimed to test the following six hypotheses:

H1: Adding the warning message to an Amazon-style platform will affect participants' self-reported confidence that the safety of the product that they purchased in the experiment have been checked (Group 2 vs. Group 1).

H2: Adding the verified seller badge to an Amazon-style platform will affect participants' self-reported confidence that the safety of the product that they purchased in the experiment have been checked (Group 3 vs. Group 1).

H3: Adding the warning message to an Etsy-style platform will affect participants' self-reported confidence that the safety of the product that they purchased in the experiment have been checked (Group 5 vs. Group 4).

[3] The trial protocol was written and signed-off before fieldwork and data collection, therefore it described the trial in the future tense. The research team followed the trial protocol to conduct the trial and data analysis, and the original trial protocol is included in Annex 1 without amends, following standard practice.

H4: Adding the verified seller badge to an Etsy-style platform will affect participants' self-reported confidence that the safety of the product that they purchased in the experiment have been checked (Group 6 vs. Group 4).

H5: The effect of the warning message on participants' self-reported confidence that the safety of the product that they purchased in the experiment have been checked will differ by platform.

H6: The effect of the verified seller badge on participants' self-reported confidence that the safety of the product that they purchased in the experiment have been checked will differ by platform.

Outcome measures

The primary outcome was measured by the first question in the post-intervention survey–"How confident were you that the safety of the product you purchased on #eMarketPlace/Goodies# had been checked?"–and participants answered this question with a 7-point Likert scale from 1 (not at all confident) to 7 (extremely confident).[4] The primary outcome captured the level in the decision-making process the interventions were hypothesised to influence–to disrupt the automatic process, provide information that could affect confidence around product safety checks, and raise awareness of potential risks, while not necessarily affecting purchase decision.

The online experiment also collected a battery of secondary outcome measures in the post-intervention survey to explore the steps in the decision-making process:

- prior to the level of the primary outcome, e.g., whether participants noticed the interventions,
- parallel to the level of the primary outcome, e.g., whether the interventions affected participants' knowledge of information given in the interventions around product safety,
- and beyond the level of the primary outcome, e.g., whether the interventions changed purchasing decisions.

The survey also asked the participants about which factors affected purchase decisions and how they identified whether the safety of the product purchase had been checked. A question on perception of risks of shopping on online marketplaces versus shopping in physical shops was also included, in order to investigate whether the interventions led to any backfire effects on attitudes toward shopping on online marketplaces. The experiment also recorded data on actual behaviour and purchase decisions in the shopping task which complimented the survey measures.

Analyses of the experiment data included null hypothesis testing (i.e., testing for "statistical significance") on the primary outcome measure, and descriptives of the achieved sample for the secondary outcome measures (which should not be taken as robust population estimates). In order to avoid spurious results caused by multiple hypotheses testing, statistical tests were not performed on secondary outcome measures.

[4] Only Point 1 and 7 were labelled with text. Point 2 to 6 had only numeric labels without text.

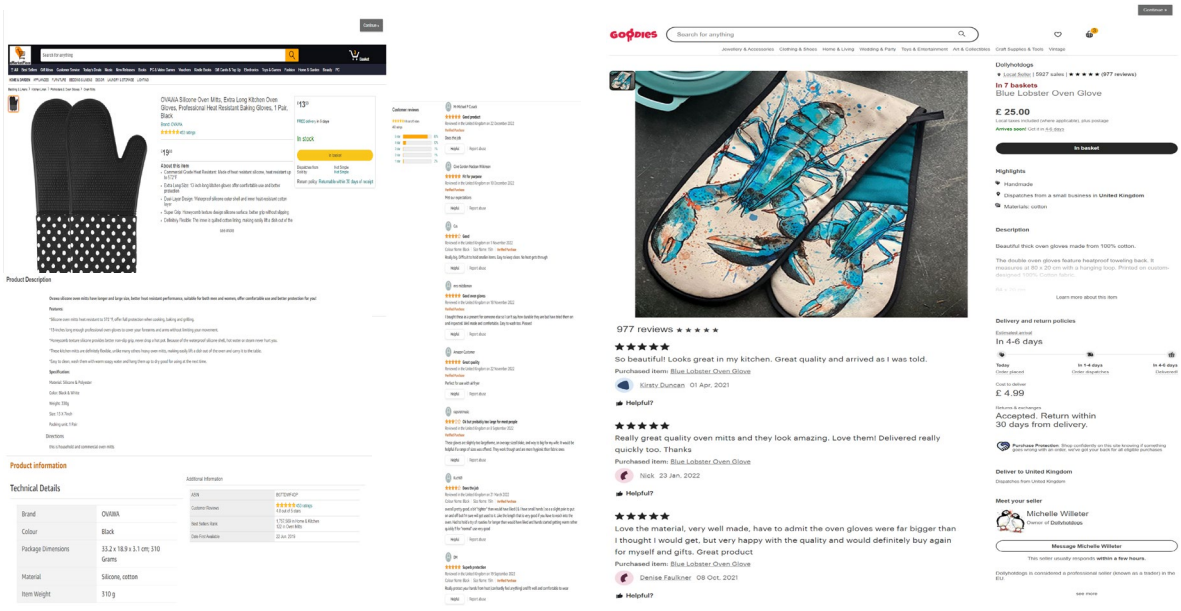
The shopping task

The shopping task took place in a simulated online marketplace styled after either Amazon or Etsy (See Figure 3 for screenshots).

The shopping task was designed to mirror real-world consumer journeys on online marketplaces like Amazon and Etsy. Participants were asked to shop for three items—a pair of oven gloves, a mains-powered lamp, and a child's toy with lots of parts. For each item, there was a shortlist of three alternative products in the participant's basket. Participants saw the product page for each alternative (in a random order) and then needed to remove two of the three products from their basket and proceed to checkout with their preferred item.

The shopping task focused on these three product types as they were subject to higher risks around compliance and product safety (i.e., more likely to fail compliance and safety checks). For each item, alternative products were selected from Amazon Marketplace and Etsy respectively that were broadly comparable in terms of price, style, ratings and popularity, and replicated the product pages of all the chosen products in the experiment. Only products that were sold by third party sellers, were popular among consumers, and not of known brands were eligible. See the Trial Protocol in Annex 1 for the list of products included in the study.

Figure 3. Screenshots of the product pages of the simulated online marketplace



(a) Amazon-style online marketplace

(b) Etsy-style online marketplace

Sample, recruitment, and study engagement

The trial took place between 28th February and 10th March 2023, with a sample of 3,600 participants from Kantar Profiles' panel. To control the sample profile, the recruitment involved quotas on age, gender, region and ethnicity, using targets based on OPSS's data on consumers who had recently purchased from at least one online marketplace (Office for Product Safety and Standards and YouGov, 2022). Participants also needed to pass a

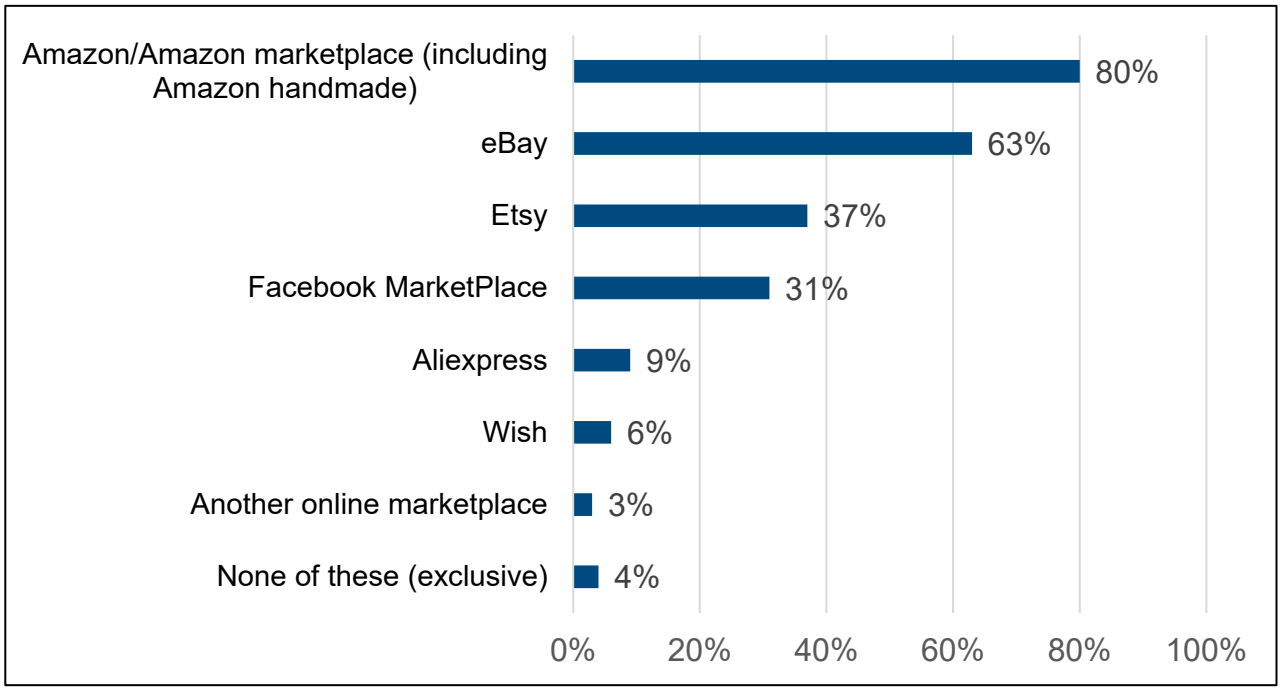
screener question that was designed to check whether they were paying attention. See Table 4 in Appendix 1 for achieved sample versus quotas.

Almost all participants (96%) had browsed online marketplaces in the past three months, and 54% looked at them at least once a week. When asked to say which specific online marketplaces they had visited, the most commonly selected marketplace was Amazon/Amazon Marketplace (including Amazon handmade) (80%), followed by eBay (63%), Etsy (37%), and Facebook Marketplaces (31%) (see Figure 4). See Table 5 in Appendix 1 for details of usage of online marketplaces in real life by participants in each condition.

Participants on average took 8 minutes and 22 seconds (median) to complete the whole study, with the majority using smartphones (51.6%) and desktop/laptop (42.8%). In the shopping task, participants on average spent 15 seconds (median) on each product page and scrolled down to see 68% (median) of the product pages.[5] Participants spent an average of 16 seconds (median) on each checkout page.

See Table 3 and Table 6 in the Appendices for demographic information and metrics of study engagement by condition.

Figure 4. Percentages of participants having browsed different online marketplaces in the last three months*



*In the last three months, which of the following websites have you looked at? Base: all participants (N = 3600)

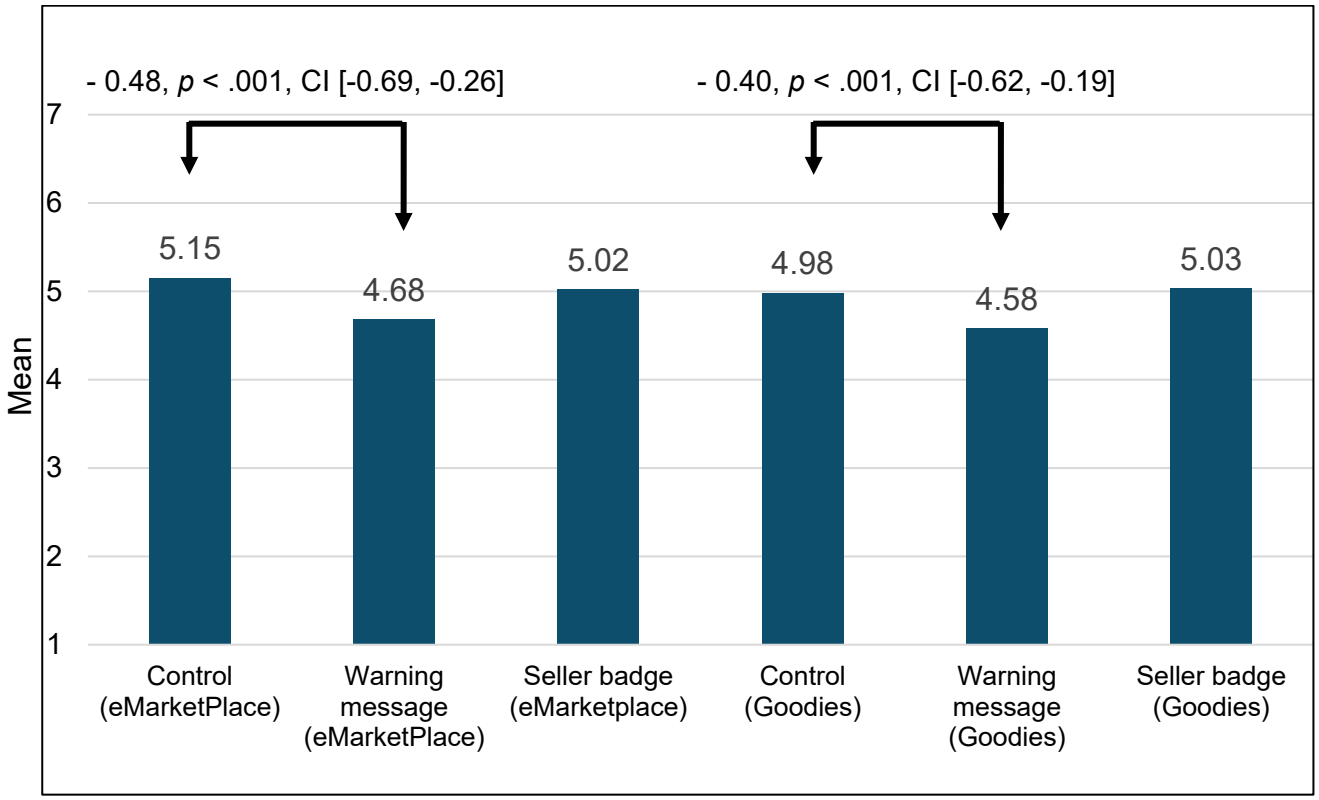
[5] Percentage of product page shown was derived by adding the height of the hidden part of the page on top and the height of the currently shown part of the page. The sum was then divided by the height of the whole page to get the percentage. Percentage of product page shown was similar across device used and trial conditions (see Table 2 in Appendix 1).

Effects of the warning message and verified seller badge on confidence that product safety had been checked

The **warning message** led to lower self-reported confidence that the safety of the products that they purchased in the experiment had been checked (Figure 5). On both platforms, mean confidence was lower when the warning messages were shown (eMarketPlace: 4.68; Goodies: 4.58) than when there were no interventions present (eMarketPlace: 5.15; Goodies: 4.98). These differences were statistically significant (eMarketPlace: estimated difference = -0.48, $p < .001$; Goodies: estimated difference = -0.40, $p < .001$).

The **verified seller badge** did not discernibly affect self-reported confidence that the safety of the products that they purchased in the experiment had been checked. Mean confidence when the badges were shown (eMarketPlace: 5.02; Goodies: 5.03) did not differ significantly from confidence when no interventions were shown (eMarketPlace: estimated difference = -0.13, $p = 0.737$; Goodies: estimated difference = 0.05, $p = 1.000$).

Figure 5. Confidence in the fact that product safety had been checked*



*Mean score on a scale of 1 ("not at all confident") to 7 ("extremely confident"): "How confident were you that the safety of the product you purchased on eMarketPlace/Goodies had been checked?" Base: all participants (N = 3600). Confidence levels (CI) shown in the graph are 95% family-wise confidence levels with Bonferroni adjustment for simultaneous tests for six general linear hypotheses.

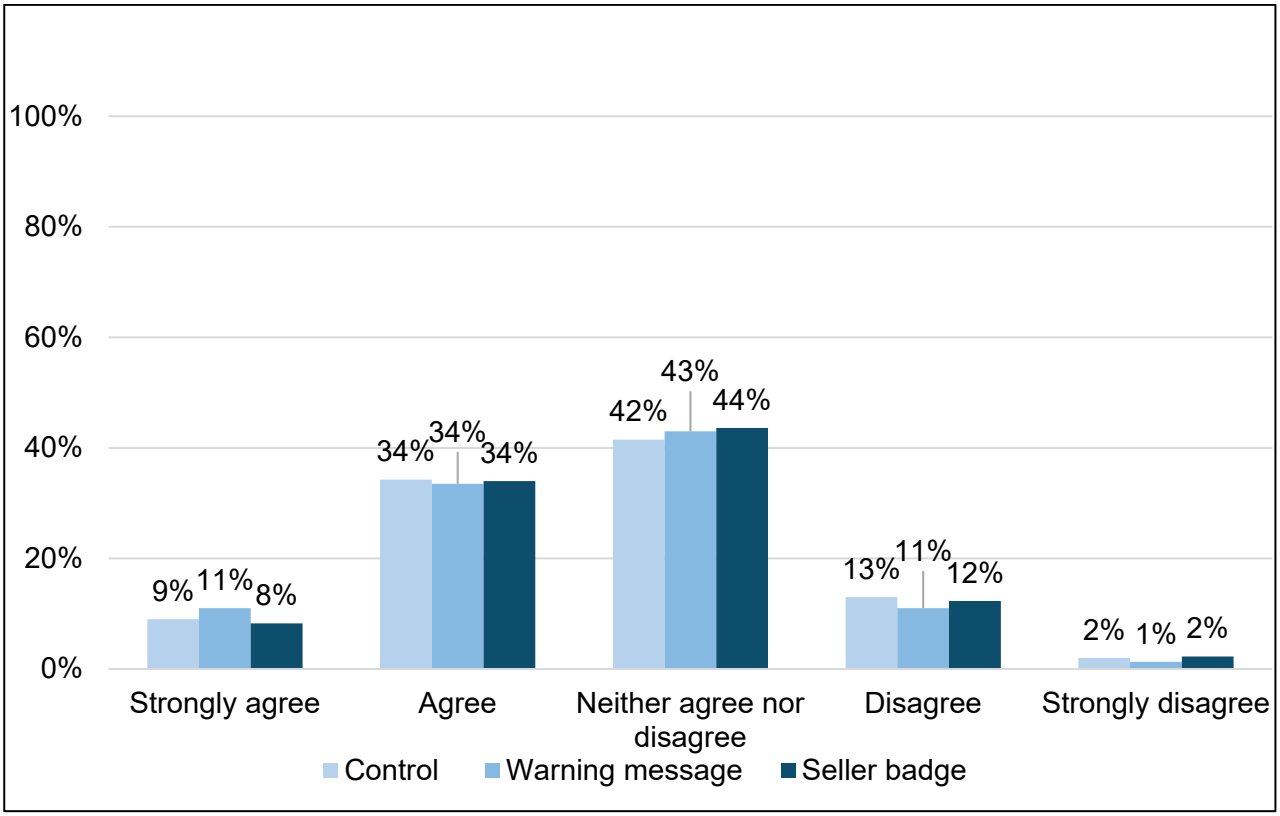
The decrease in self-reported confidence that the safety of the products that they purchased in the experiment had been checked caused by the **warning message** did not differ **between platforms** (eMarketPlace - Goodies: estimated difference = -0.08, $p = 1.000$). There was also no difference between the platforms in the difference between the **verified seller badge** and Control conditions (eMarketPlace - Goodies: estimated difference = -0.18, $p = 0.829$).

See Table 7 in Appendix 2 for frequency table for confidence that the safety of the chosen product had been checked. As per the analysis plan, two sensitivity analyses for the primary outcome were performed, and all results remained robust to alternative analytic decisions. See Table 8 in Appendix 2 for the results using the main model with a set of covariates added, and Table 9 in Appendix 2 for the results using an ordered probit model.

Perceptions of safety risks when shopping on online marketplaces in real life

Across all conditions, more participants agreed that products bought from online marketplaces have more safety risks than products bought in shops (Figure 6). There were no obvious differences in the distribution of perceived safety across groups, suggesting that the interventions would not discourage large numbers of consumers from shopping on online marketplaces (See Figure 6 and Table 10 in Appendix 2 for details).

Figure 6. Attitudes towards product safety risks on online marketplaces*



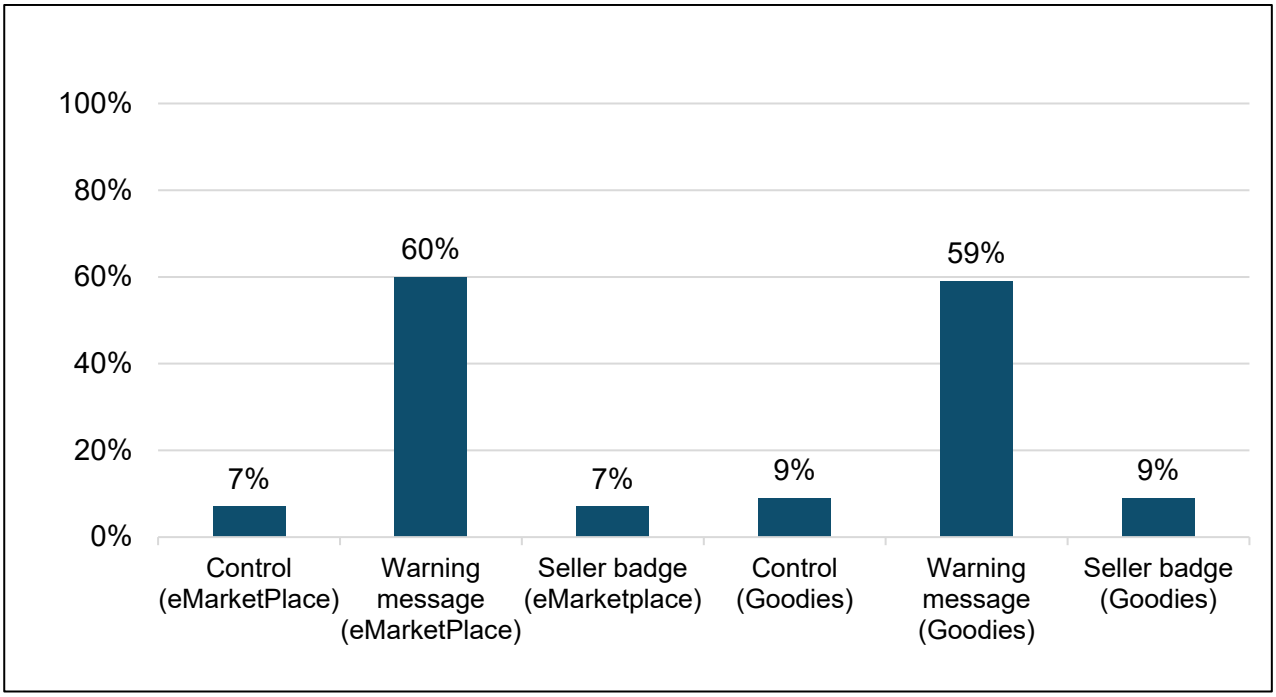
*To what extent, if at all, do you agree or disagree with the following statements? Products bought on online marketplaces have more safety risks than products bought in shops. Base: all participants (N = 3600)

Did participants notice the warning messages and verified seller badges?

Most participants in the verified seller badge conditions did not recall seeing them (eMarketPlace: 18%; Goodies: 30%). This may explain why the badges had no discernible effect on confidence in product safety checks. Indeed, in the case of eMarketPlace, the proportion who recalled seeing the badges was similar regardless of whether or not they were actually shown the badges. By contrast, most participants in the warning message groups *did* recall seeing them (eMarketPlace: 60%; Goodies: 59%).

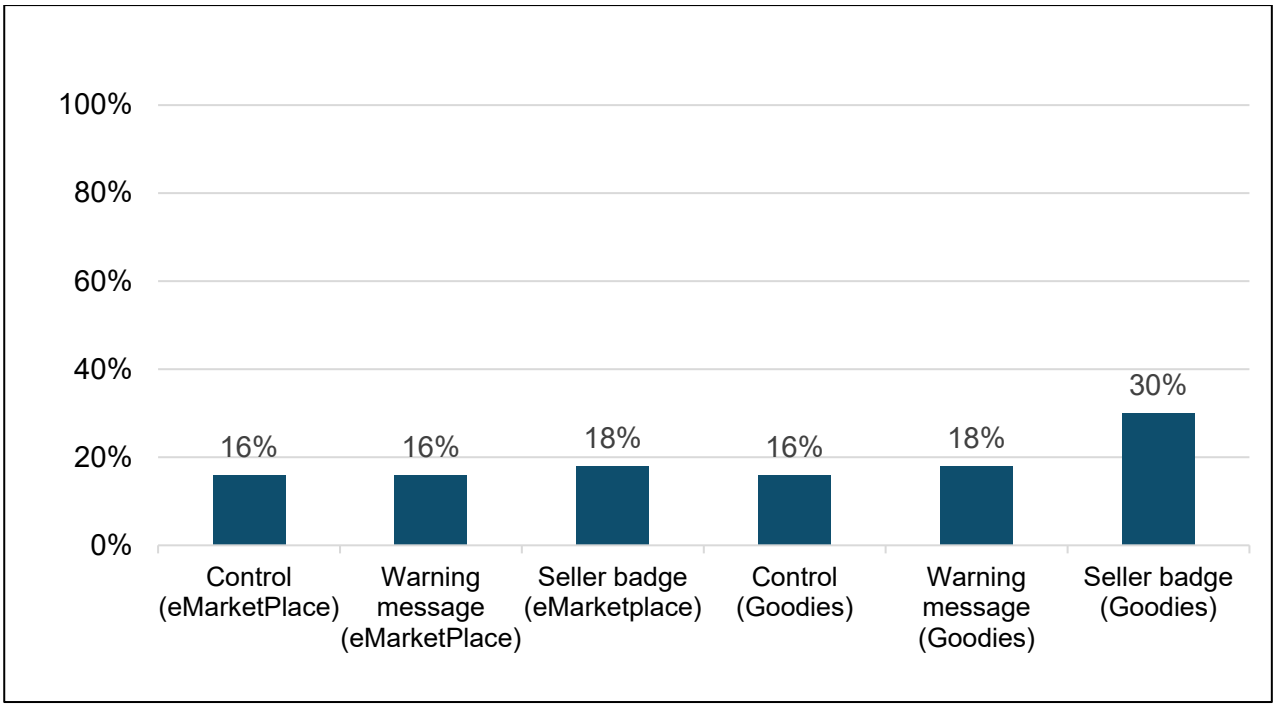
The verified seller badges were better recalled on the Etsy-style platform than on the Amazon-style platform. This is consistent with what participants in the qualitative phase told us: third party seller information is shown more prominently on Etsy and eBay than on Amazon. See Figure 7 and Figure 8 for the percentage of participants who recalled seeing each intervention by group.

Figure 7. Percentage of participants who recalled seeing the warning message*



*Which of the following do you recall seeing on any of the product pages (including any pop-up) shown to you? - Warning message saying “This product is sold by a third party seller. eMarketPlace/Goodies has not verified the product safety checks that the seller has done on this product.” Base: all participants (N = 3600)

Figure 8. Percentage of participants who recalled seeing the verified seller badge*



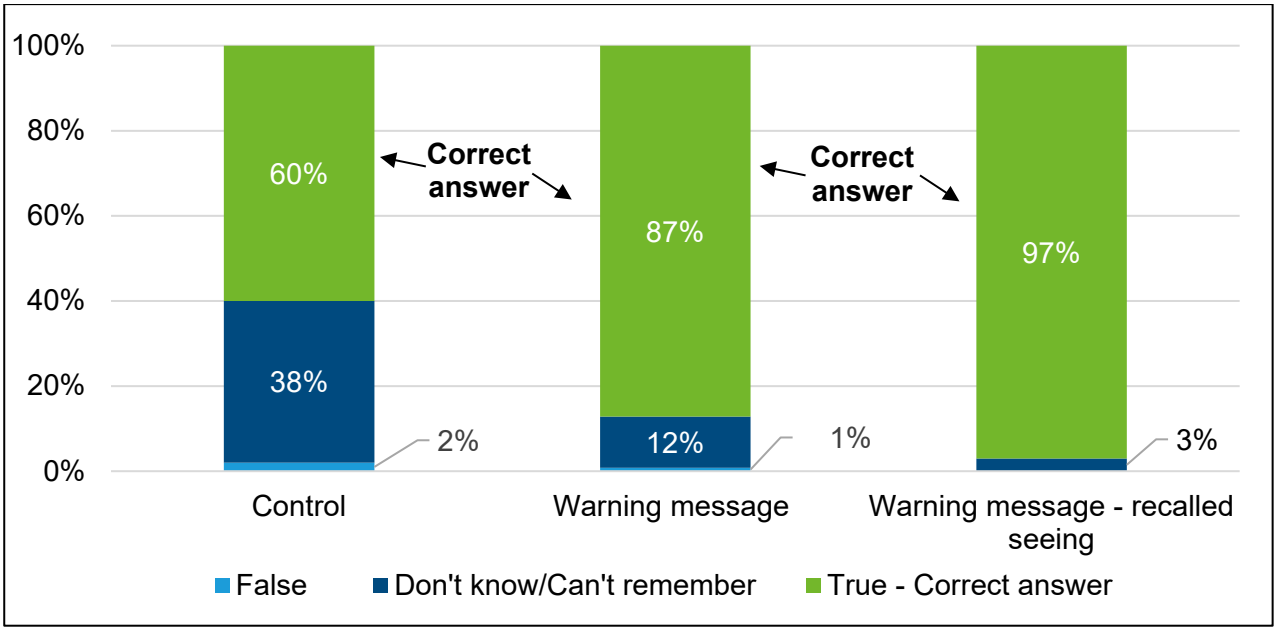
*Which of the following do you recall seeing on any of the product pages (including any pop-up) shown to you? - An icon with the text "Verified Seller". eMarketPlace/Goodies has not verified the product safety checks that the seller has done on this product." Base: all participants (N = 3600)

Some participants said they recalled seeing interventions which did not exist in the experiment for the condition they were in. This happened about twice as often for the verified seller badges (16-18%) as for the warning messages (7-9%). Verbatim responses in the questionnaire suggest that some participants confused the intervention with other, similar elements on the online marketplaces, e.g., the "verified purchase" indicator and "star seller" badge. A sensitivity check was conducted re-running figures shown in Figure 7 and Figure 8 excluding participants who selected some options that were never shown in any condition. This did not affect the overall pattern of results: the warning messages were far more often remembered than the verified seller badges (See Table 11 and Table 12 in Appendix 2 for details).

Warning messages appeared to improve participants' knowledge

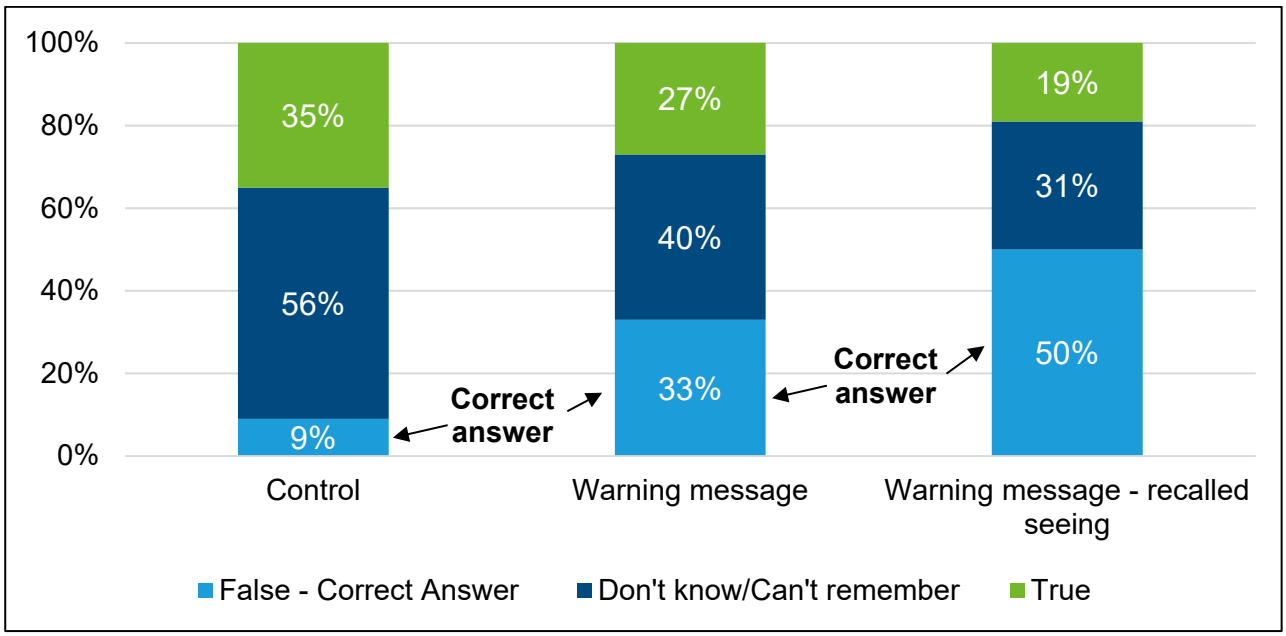
In the control groups, 60% of participants knew that some products on the simulated online marketplaces were sold by third party sellers (Figure 9) but only 9% knew that those marketplaces do not verify safety checks for all products sold on their platform (Figure 10, and Table 14 in Appendix 2 for more details). Those in the conditions showing warning messages performed better on both measures: 87% and 33%, respectively. This pattern was more pronounced for participants who recalled seeing the warning messages, i.e., those who noticed and paid attention to them (97% and 50%, respectively). These results suggest that warning messages may be an effective way to improve consumers' knowledge about the online platforms they shop on.

Figure 9. Knowledge of third party sellers for control and warning message conditions*



*Please select whether each of the following statements is true or false. Some products sold on #eMarketPlace/Goodies# are sold by third party sellers. Base: participants in the control and warning message conditions (Control N = 1200; Warning message N = 1200; Warning message - recalled seeing N = 711)

Figure 10. Knowledge of platform role on verifying product safety checks for control and warning message conditions*



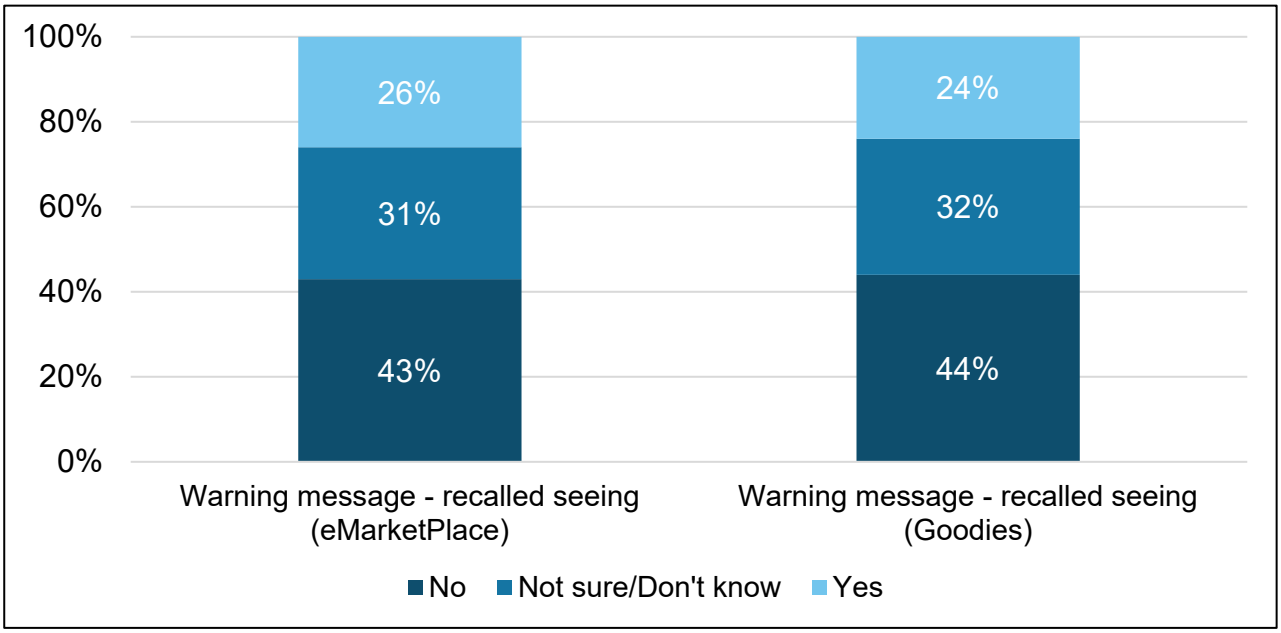
*Please select whether each of the following statements is true or false. All products sold on #eMarketPlace/Goodies# are sold by sellers based in the UK. Base: participants in the control and warning message conditions (Control N = 1200; Warning message N = 1200; Warning message - recalled seeing N = 711)

Few participants said the warning messages affected their purchase decisions

Despite the warning messages appearing to improve knowledge and reduce confidence that safety checks had been carried out, only 24-26% of those who recalled seeing the message said it affected their purchasing decision in the task. Most either said the message did not influence them (43-44%) or they didn't know (31-32%). This pattern was the same across both platforms. (See Figure 11 and Table 18 in Appendix 2 for details). See Table 17 in Appendix 2 for details of product purchased by condition.

The survey question asked for a verbatim description of why the message did or did not affect their purchasing decisions. Amongst those who said the message had no effect, many were not surprised by the warning message. They were used to buying from third party sellers, had not had issues buying from them in the past, and accepted the risk of doing so. Others did not regard the warning message as a signal of product quality and trusted other information available (e.g., reviews by other consumers). Of those who said the warning message *did* affect their purchase decision, some responded by looking at the product information and reviews more carefully and some were put off from purchasing from online marketplaces in general.

Figure 11. Survey responses on whether the warning message influenced purchase decision in the experiment*



*You said you saw a warning message saying “This product is sold by a third party seller. #eMarketPlace/Goodies# has not verified the product safety checks that the seller has done on this product.” on the product page. Did this influence your decision about whether to purchase that product or not? Base: participants who recalled seeing the warning message in the warning message conditions (N = 711)

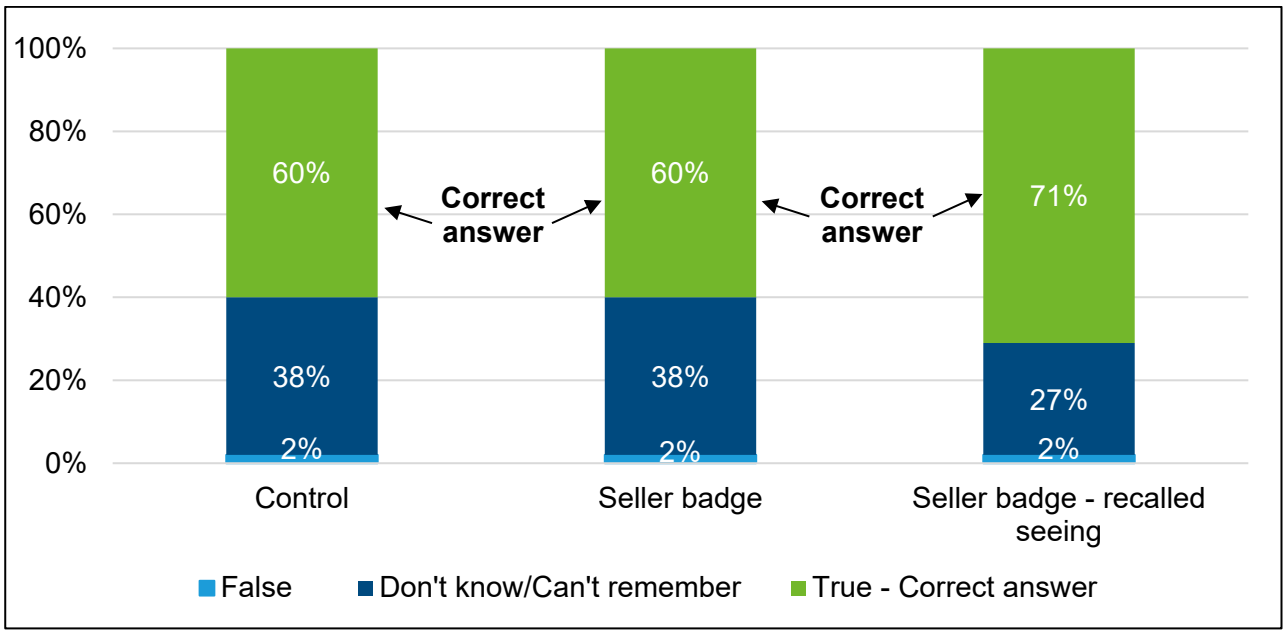
The verified seller badges created a false sense of security about product safety but did not appear to affect purchasing behaviour

The verified seller badges also appeared to affect knowledge, but not always in the right direction. Figure 12 and Figure 13 compare the knowledge of three groups: participants in the control conditions, participants shown the verified seller badges, and those shown the badges who actually remembered seeing them. Compared to those in the control conditions, those who recalled seeing the badges (i.e., those who noticed and paid attention to them) were more often correct about some products being sold by third party vendors (71% vs 60%). However, a higher proportion of them also wrongly thought that the online marketplace had verified all product safety checks (52% vs 35%). The proportion of *correct* responses to the latter measure was similar across conditions, so the apparent switch is from uncertainty (“don’t know/can’t remember”) to misguided certainty.

The suggestion that the verified seller badges lead to a misleading sense of security about product safety is consistent with some responses to the study's primary outcome too. Participants in the 'verified seller' groups who recalled seeing the badges reported higher mean confidence that safety checks had been carried out on the products they purchased in the shopping task (Mean = 5.41) than did those who did not recall them (Mean = 4.90).

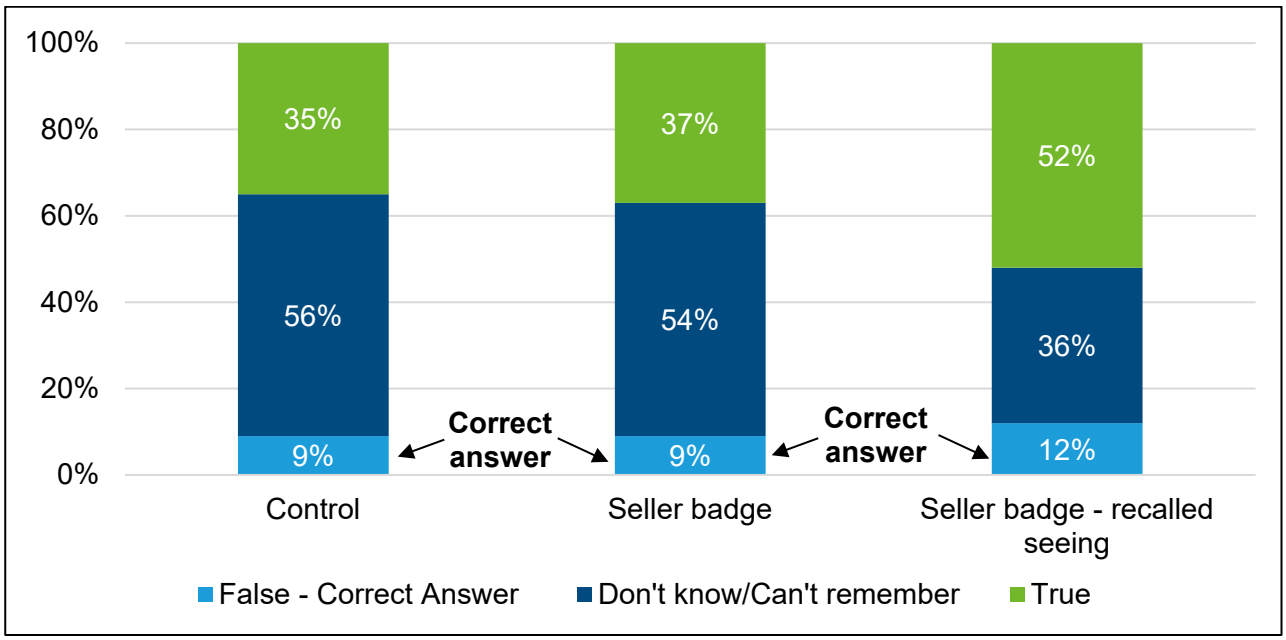
Unsurprisingly, the difference between the control and verified seller groups is far less marked when including a large number of participants who could not recall seeing the badges.

Figure 12. Knowledge of third party sellers for control and verified seller badge conditions*



*Please select whether each of the following statements is true or false. Some products sold on #eMarketPlace/Goodies# are sold by third party sellers. Base: participants in the control and seller badge conditions (Control N = 1200; Seller badge N = 1200; Seller badge - recalled seeing N = 288)

Figure 13. Knowledge of platform role in verifying product safety checks for control and verified seller badge conditions*

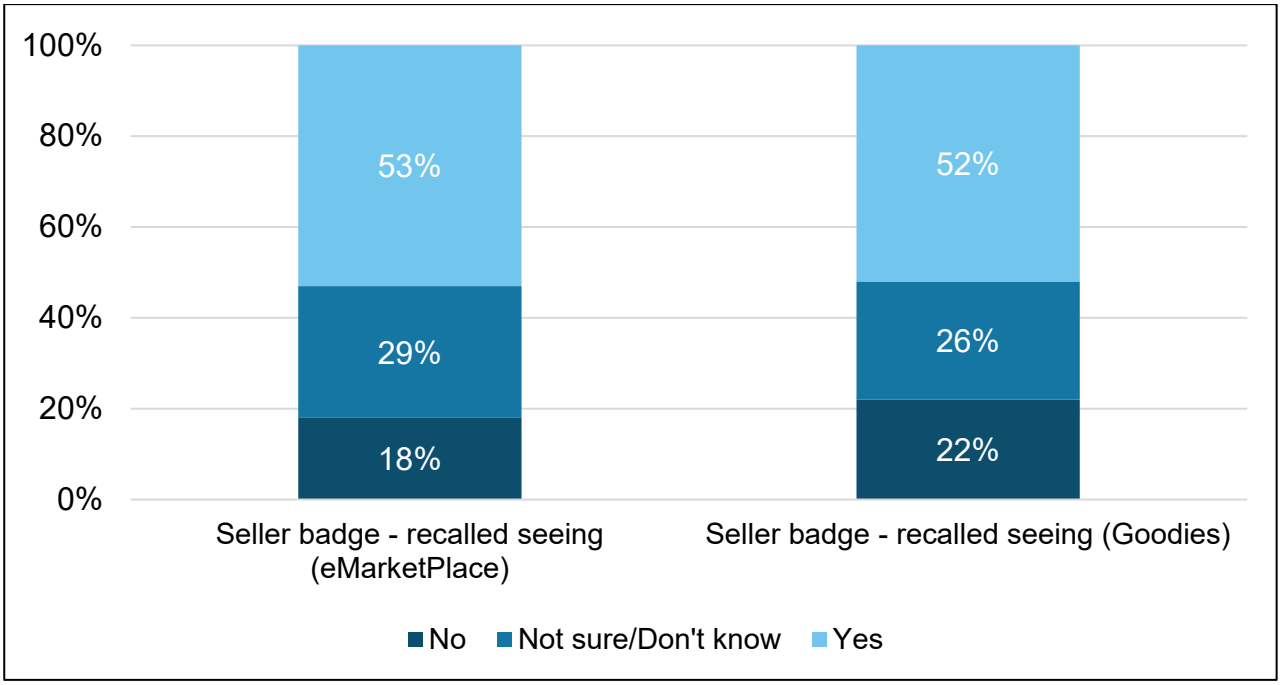


*Please select whether each of the following statements is true or false. All products sold on #eMarketPlace/Goodies# are sold by sellers based in the UK. Base: participants in the control and seller badge conditions (Control N = 1200; Seller badge N = 1200; Seller badge - recalled seeing N = 288)

Unlike the warning message, most participants who recalled the verified seller badges said it did affect their purchasing decisions (52-53%, depending on platform; Figure 14 and Table 19 in Appendix 2 for details). However, this does not align with their actual purchasing behaviour in the task: the products associated with the verified seller badge

were selected at approximately chance-level[6] on both platforms (eMarketPlace: 34%; Goodies: 36%; Figure 15). In other words, whether or not a product had the verified seller badge appeared to have little impact on whether consumers purchased it.

Figure 14. Survey responses on whether the verified seller badge influenced purchase decision in the experiment*



* You said you saw an icon with the text "Verified Seller" on the product page. Did this influence your decision about whether to purchase that product or not? Base: participants who recalled seeing the verified seller badge in the seller badge conditions (N = 288)

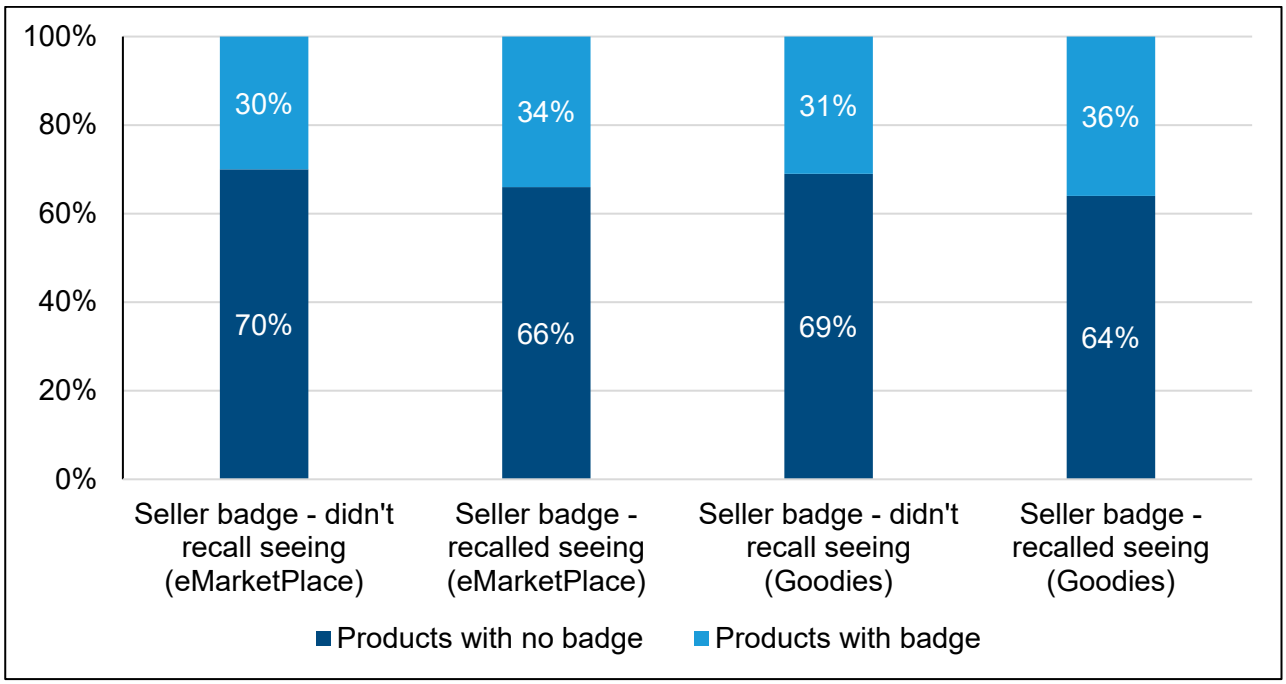
Verbatim responses from participants may shed some light on this apparent contradiction. Some appeared to confuse the verified seller badges with other elements of the product pages, such as the “verified purchase” indicator on reviews[7] or the “star seller” badge.[8] Others seemed to overinterpret the verified seller badges, taking them as signals of high product quality in general or as an assurance from the platform of the seller and their products. This confusion may arise from the fact that the verified seller badges only explain what they mean if clicked on, and very few participants did this (a total of 15 clicks from 1200 participants in the seller badge conditions, see Table 13 in Appendix 2 for more details).

[6] The verified seller badge was randomly assigned to one of the three alternatives in a product category for each participant, so if the badge did not affect purchase decisions, around one third (33%) of the products purchased should have the badge

[7] Which confirm that the reviewer actually purchased the product they are reviewing

[8] Which indicate previous positive customer experiences

Figure 15. Percentage of purchased products with or without badge in verified seller badge conditions*



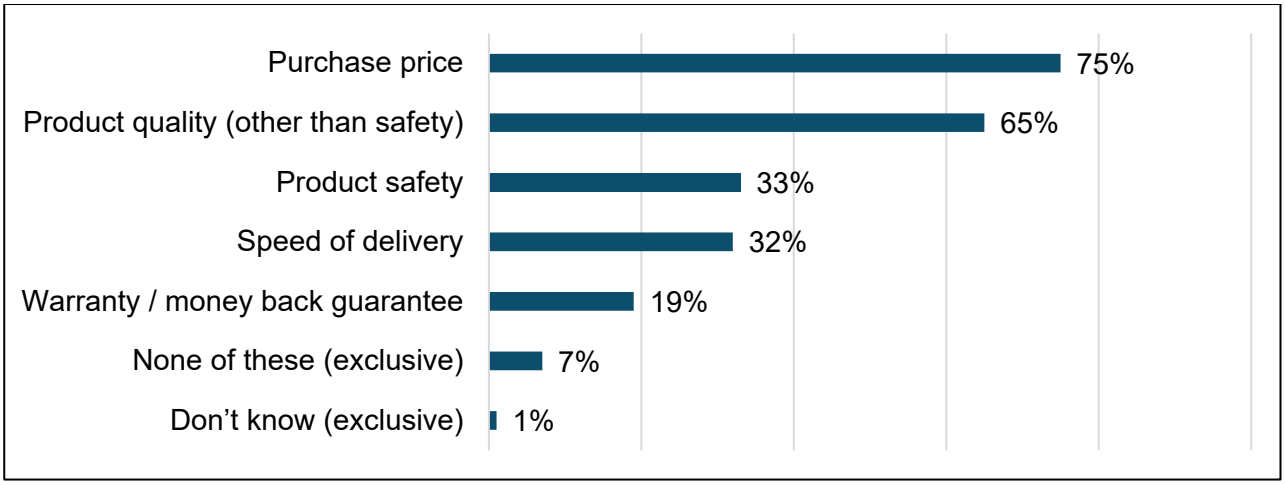
*Base: products chosen in the shopping task by participants in the 'verified seller' groups (N = 3600)

Baseline behaviour and beliefs echo the findings from the qualitative phase

The findings above reveal a critical knowledge gap—most participants are aware that products on online marketplaces can be sold by third party vendors, but they are less well informed about the fact that platforms do not verify product safety checks. This echoes what participants said in the qualitative phase of this research and the interventions were designed with the intention of bridging this gap.

Also consistent with the qualitative findings is that participants did not appear to give much consideration to product safety risks. When asked what factors they took into account when choosing their products in the shopping task, only 33% of control group participants said product safety. (see Figure 16 and Table 15 in Appendix 2 for details). The most commonly selected answers were purchase price (75%) and product quality other than safety (65%).

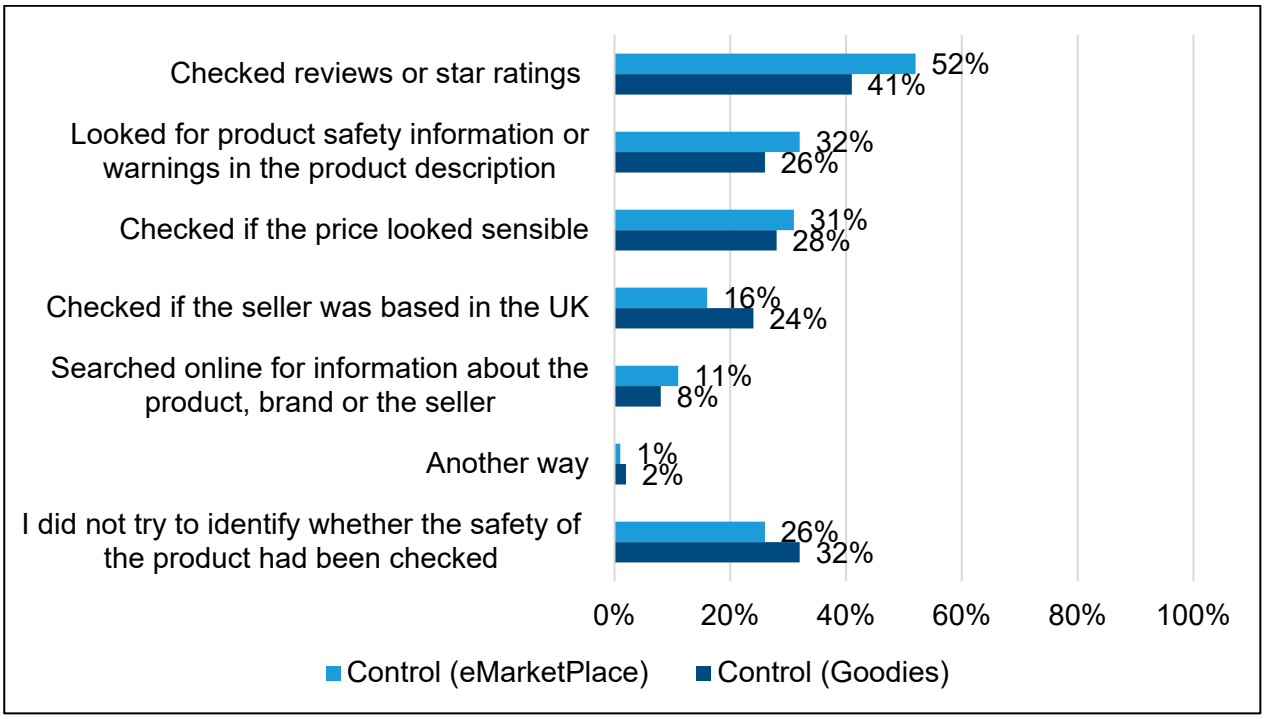
Figure 16. Factors considered when choosing a product in the experiment*



*Which, if any, of these did you take into account when choosing a product on #eMarketPlace/Goodies#? Base: participants in the control conditions (N = 1200)

Nor is it clear that participants know how to seek out product safety information when they want to. When asked how they had identified whether the safety of the product that they purchased had been checked, checking the reviews or star ratings was the answer that was most frequently chosen for both platforms, and this answer was checked by a majority of participants for the Amazon-style platform (52%). Figure 17 shows that there was a similar distribution of ways of seeking product safety information across platforms. This pattern was also repeated across all conditions, suggesting that neither the warning message nor the verified seller badges had any discernible effects on how consumers sought out safety information (See Table 16 in Appendix 2 for more details).

Figure 17. Ways to verify product safety on online marketplaces*



*How did you identify whether the safety of the product you purchased on #eMarketPlace/Goodies# had been checked? Please select all that apply. Base: participants in the control conditions (N = 1200)

While the findings across the two simulated platforms in this study have generally been similar, there were some differences in the salience of features that consumers might use to identify whether a product is safe. For example, the third party seller's name was more salient on the Etsy-style platform (Goodies: 40% of control group participants reported that they recalled seeing the seller's name) than on the Amazon-style platform (eMarketPlace: recalled by 24% of control group participants). Again, this echoed what participants in the qualitative phase said about the platforms the simulated marketplaces were based upon. See Table 11 in Appendix 2 for a full summary of how frequently different features on a product page were recalled by participants by platform.

Discussion

Strengths and limitations

This was a mixed-method project using various approaches (including rapid evidence review, interviews, eye-tracking, online trial) to get a comprehensive picture of how product safety influences people when shopping on online marketplaces. The project also designed and tested potential interventions to influence perceptions of product safety for consumers on online marketplaces. Throughout the project, Kantar Public were in close discussion and collaboration with OPSS to understand the context of policy development and to make sure the project can generate useful findings for OPSS. Both the qualitative and quantitative stages of the project applied the method to maximise ecological validity, so the evidence would speak to real life situations. Different parts of the project provided consistent results, giving confidence in the validity of the findings.

The research team designed each phase of the study to maximise the generalisability of findings across different online marketplaces. The qualitative research included five platforms and the experiment included two. However, the experiment focused on testing the interventions on the two platforms that had the biggest difference in response in the qualitative stage, yet the results were similar across platforms. Therefore, it is reasonable to think they might generalise to other platforms.

Nevertheless, there are inevitably some limitations to what can be inferred from the project's results.

Firstly, the online shopping environment is changing every day and how consumers behave on online marketplaces in the future might be different from what the project found now. Similarly, what the online trial captured was participants' immediate responses to interventions that do not exist in the online marketplaces now. If they saw the interventions every time they shopped, participants might adapt and stop responding to the interventions. Online marketplaces would also respond to any intervention, which will create long-term dynamics that are more complicated than what we see in the short term.

There is also room for further improvement of the interventions tested in the online trial. For example, although the warning message was effective, there were still participants who did not recall seeing the message or did not fully comprehend the information it conveyed.

Finally, although the research tried to maximise ecological validity, there were still some deviations from real life situations, which have more variation and nuance than the simulation. The qualitative stage relied on recall of purchase journeys. The experiment included products that were supposed to be comparable within their product categories, but in real life, even within a narrow product category, products could have very different perceived risks. Further, all the products included in the experiment were sold by third parties, but in real life there might be a situation where people are choosing between is a mixture of third party and platform-branded products.

Conclusion

Both the qualitative and quantitative parts of the project found that consumers have low awareness of product safety risk. However, interventions to clarify the extent to which online marketplaces verify product safety checks of third party sellers could improve

awareness. Specifically, this project found that a warning message affected participants' confidence that the seller had checked product safety in a simulated online shopping task. It also improved their knowledge about third party sellers and the role of the platform in product safety. However, a verified seller badge was not effective; it was normally not noticed by consumers, but when it was, it was misunderstood. Online interventions can be effective at improving knowledge and awareness of product safety. However, they need to be designed carefully to avoid inattention to them and misinterpretation.

Appendix 1 Demographics of the Sample in the Trial

Table 3. Demographics of participants

	Control (eMarket Place) (N=601)	Warning message (eMarket Place) (N=600)	Seller badge (eMarket Place) (N=600)	Control (Goodies) (N=599)	Warning message (Goodies) (N=600)	Seller badge (Goodies) (N=600)	Overall (N=3600)
Age band							
18-24	69 (11.5%)	89 (14.8%)	88 (14.7%)	78 (13.0%)	67 (11.2%)	71 (11.8%)	462 (12.8%)
25-34	116 (19.3%)	107 (17.8%)	114 (19.0%)	100 (16.7%)	104 (17.3%)	107 (17.8%)	648 (18.0%)
35-44	108 (18.0%)	112 (18.7%)	88 (14.7%)	88 (14.7%)	113 (18.8%)	106 (17.7%)	615 (17.1%)
45-64	193 (32.1%)	194 (32.3%)	190 (31.7%)	215 (35.9%)	191 (31.8%)	198 (33.0%)	1181 (32.8%)
65+	115 (19.1%)	93 (15.5%)	120 (20.0%)	117 (19.5%)	122 (20.3%)	117 (19.5%)	684 (19.0%)
Prefer not to say	0 (0%)	5 (0.8%)	0 (0%)	1 (0.2%)	3 (0.5%)	1 (0.2%)	10 (0.3%)
Gender							
Female	324 (53.9%)	342 (57.0%)	344 (57.3%)	333 (55.6%)	333 (55.5%)	338 (56.3%)	2014 (55.9%)
Male	273 (45.4%)	257 (42.8%)	254 (42.3%)	264 (44.1%)	265 (44.2%)	261 (43.5%)	1574 (43.7%)

	Control (eMarket Place) (N=601)	Warning message (eMarket Place) (N=600)	Seller badge (eMarket Place) (N=600)	Control (Goodies) (N=599)	Warning message (Goodies) (N=600)	Seller badge (Goodies) (N=600)	Overall (N=3600)
Other	3 (0.5%)	0 (0%)	1 (0.2%)	2 (0.3%)	0 (0%)	1 (0.2%)	7 (0.2%)
Prefer not to say	1 (0.2%)	1 (0.2%)	1 (0.2%)	0 (0%)	2 (0.3%)	0 (0%)	5 (0.1%)
Region							
North	160 (26.6%)	136 (22.7%)	144 (24.0%)	136 (22.7%)	153 (25.5%)	151 (25.2%)	880 (24.4%)
Midlands	95 (15.8%)	116 (19.3%)	109 (18.2%)	115 (19.2%)	106 (17.7%)	101 (16.8%)	642 (17.8%)
East	53 (8.8%)	52 (8.7%)	58 (9.7%)	49 (8.2%)	55 (9.2%)	48 (8.0%)	315 (8.8%)
London	64 (10.6%)	66 (11.0%)	54 (9.0%)	71 (11.9%)	60 (10.0%)	59 (9.8%)	374 (10.4%)
South	129 (21.5%)	153 (25.5%)	145 (24.2%)	153 (25.5%)	142 (23.7%)	139 (23.2%)	861 (23.9%)
Scotland	52 (8.7%)	47 (7.8%)	42 (7.0%)	42 (7.0%)	51 (8.5%)	53 (8.8%)	287 (8.0%)
Wales	29 (4.8%)	25 (4.2%)	33 (5.5%)	22 (3.7%)	22 (3.7%)	32 (5.3%)	163 (4.5%)
North Ireland	19 (3.2%)	5 (0.8%)	15 (2.5%)	11 (1.8%)	11 (1.8%)	17 (2.8%)	78 (2.2%)
Ethnicity							
White	537 (89.4%)	515 (85.8%)	541 (90.2%)	532 (88.8%)	536 (89.3%)	524 (87.3%)	3185 (88.5%)

	Control (eMarket Place) (N=601)	Warning message (eMarket Place) (N=600)	Seller badge (eMarket Place) (N=600)	Control (Goodies) (N=599)	Warning message (Goodies) (N=600)	Seller badge (Goodies) (N=600)	Overall (N=3600)
Mixed	11 (1.8%)	22 (3.7%)	14 (2.3%)	14 (2.3%)	10 (1.7%)	20 (3.3%)	91 (2.5%)
Asian	32 (5.3%)	36 (6.0%)	34 (5.7%)	35 (5.8%)	34 (5.7%)	35 (5.8%)	206 (5.7%)
Black	14 (2.3%)	20 (3.3%)	7 (1.2%)	13 (2.2%)	17 (2.8%)	16 (2.7%)	87 (2.4%)
Arab/Other	4 (0.7%)	4 (0.7%)	2 (0.3%)	2 (0.3%)	0 (0%)	2 (0.3%)	14 (0.4%)
Prefer not to say	0 (0%)	1 (0.2%)	0 (0%)	2 (0.3%)	0 (0%)	1 (0.2%)	4 (0.1%)
No consent	3 (0.5%)	2 (0.3%)	2 (0.3%)	1 (0.2%)	3 (0.5%)	2 (0.3%)	13 (0.4%)
Education							
Degree-level or above	219 (36.4%)	221 (36.8%)	194 (32.3%)	193 (32.2%)	231 (38.5%)	230 (38.3%)	1288 (35.8%)
Other higher education below degree level	39 (6.5%)	45 (7.5%)	38 (6.3%)	38 (6.3%)	44 (7.3%)	41 (6.8%)	245 (6.8%)
A-level/vocational A-level or equivalent	136 (22.6%)	144 (24.0%)	144 (24.0%)	126 (21.0%)	124 (20.7%)	136 (22.7%)	810 (22.5%)
International Baccalaureate	13 (2.2%)	9 (1.5%)	6 (1.0%)	5 (0.8%)	6 (1.0%)	6 (1.0%)	45 (1.3%)
O-level/GCSE/NVQ or equivalent	136 (22.6%)	138 (23.0%)	155 (25.8%)	164 (27.4%)	136 (22.7%)	131 (21.8%)	860 (23.9%)
Other work-related or professional qualification	42 (7.0%)	25 (4.2%)	33 (5.5%)	38 (6.3%)	37 (6.2%)	37 (6.2%)	212 (5.9%)
None of these qualifications	12 (2.0%)	11 (1.8%)	23 (3.8%)	31 (5.2%)	21 (3.5%)	15 (2.5%)	113 (3.1%)

	Control (eMarket Place) (N=601)	Warning message (eMarket Place) (N=600)	Seller badge (eMarket Place) (N=600)	Control (Goodies) (N=599)	Warning message (Goodies) (N=600)	Seller badge (Goodies) (N=600)	Overall (N=3600)
I don't know	3 (0.5%)	3 (0.5%)	1 (0.2%)	2 (0.3%)	0 (0%)	2 (0.3%)	11 (0.3%)
Prefer not to say	1 (0.2%)	4 (0.7%)	6 (1.0%)	2 (0.3%)	1 (0.2%)	2 (0.3%)	16 (0.4%)

Table 4. Achieved sample versus quotas

Gender	Quota %	Achieved %	Age Group	Quota %	Achieved %	Region	Quota %	Achieved %	Ethnicity	Quota %	Achieved %
Male	46.2	43.7	18 to 24	12.8	12.8	North	23.7	24.4	White	88.3	88.5
Female	53.8	55.9	25 to 34	18.0	18	Midlands	17.3	17.8	Mixed/Multiple ethnic groups	3.0	2.5
			35 to 44	17.6	17.1	East	9.7	8.8	Asian/Asian British	5.6	5.7
			45 to 64	32.7	32.8	London	10.9	10.4	Black/African/Caribbean/Black British	2.3	2.4
			65+	18.9	19	South	23.3	23.9	Other ethnic groups	0.8	0.4
						Scotland	8.2	8.0			
						Wales	4.4	4.5			
						Northern Ireland	2.6	2.2			

Table 5. Usage of online marketplaces in real life

	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)	Overall (N = 3600)
In the last three months, which of the following websites have you looked at? Please select all that apply.							
Amazon/Amazon marketplace (including Amazon handmade)	494 (82.2%)	482 (80.3%)	497 (82.8%)	448 (74.8%)	475 (79.2%)	475 (79.2%)	2871 (79.8%)
Etsy	210 (34.9%)	236 (39.3%)	197 (32.8%)	229 (38.2%)	222 (37.0%)	240 (40.0%)	1334 (37.1%)
eBay	373 (62.1%)	380 (63.3%)	366 (61.0%)	382 (63.8%)	391 (65.2%)	385 (64.2%)	2277 (63.3%)
Wish	43 (7.2%)	34 (5.7%)	39 (6.5%)	28 (4.7%)	30 (5.0%)	45 (7.5%)	219 (6.1%)
AliExpress	60 (10.0%)	51 (8.5%)	56 (9.3%)	50 (8.3%)	46 (7.7%)	54 (9.0%)	317 (8.8%)
Facebook Marketplace	204 (33.9%)	181 (30.2%)	189 (31.5%)	189 (31.6%)	175 (29.2%)	191 (31.8%)	1129 (31.4%)
Another online marketplace	19 (3.2%)	13 (2.2%)	13 (2.2%)	20 (3.3%)	21 (3.5%)	20 (3.3%)	106 (2.9%)
None of these (exclusive)	20 (3.3%)	27 (4.5%)	22 (3.7%)	33 (5.5%)	32 (5.3%)	21 (3.5%)	155 (4.3%)

	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)	Overall (N = 3600)
Which of these websites did you look at most often in the last three months?							
Amazon/Amazon marketplace (including Amazon handmade)	376 (62.6%)	362 (60.3%)	377 (62.8%)	303 (50.6%)	329 (54.8%)	332 (55.3%)	2079 (57.8%)
Etsy	26 (4.3%)	30 (5.0%)	29 (4.8%)	55 (9.2%)	52 (8.7%)	63 (10.5%)	255 (7.1%)
eBay	118 (19.6%)	126 (21.0%)	112 (18.7%)	147 (24.5%)	141 (23.5%)	129 (21.5%)	773 (21.5%)
Wish	4 (0.7%)	2 (0.3%)	4 (0.7%)	4 (0.7%)	0 (0%)	6 (1.0%)	20 (0.6%)
AliExpress	11 (1.8%)	12 (2.0%)	11 (1.8%)	4 (0.7%)	8 (1.3%)	7 (1.2%)	53 (1.5%)
Facebook Marketplace	42 (7.0%)	38 (6.3%)	39 (6.5%)	47 (7.8%)	33 (5.5%)	36 (6.0%)	235 (6.5%)
Another online marketplace	4 (0.7%)	3 (0.5%)	6 (1.0%)	6 (1.0%)	5 (0.8%)	6 (1.0%)	30 (0.8%)
Did not look at any online marketplace websites in the past three months (exclusive)	20 (3.3%)	27 (4.5%)	22 (3.7%)	33 (5.5%)	32 (5.3%)	21 (3.5%)	155 (4.3%)

	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)	Overall (N = 3600)
In the last three months, how often did you look at the online marketplace you used most often?							
At least once every day	90 (15.0%)	72 (12.0%)	67 (11.2%)	78 (13.0%)	63 (10.5%)	65 (10.8%)	435 (12.1%)
At least once a week but not every day	248 (41.3%)	243 (40.5%)	257 (42.8%)	254 (42.4%)	251 (41.8%)	260 (43.3%)	1513 (42.0%)
At least once every two weeks but not weekly	129 (21.5%)	148 (24.7%)	136 (22.7%)	116 (19.4%)	130 (21.7%)	123 (20.5%)	782 (21.7%)
At least once a month but not every two weeks	72 (12.0%)	71 (11.8%)	75 (12.5%)	69 (11.5%)	78 (13.0%)	90 (15.0%)	455 (12.6%)
Less often than once a month	42 (7.0%)	39 (6.5%)	43 (7.2%)	49 (8.2%)	46 (7.7%)	41 (6.8%)	260 (7.2%)
Did not look at any online marketplace websites in the past three months (exclusive)	20 (3.3%)	27 (4.5%)	22 (3.7%)	33 (5.5%)	32 (5.3%)	21 (3.5%)	155 (4.3%)

Appendix 2 Further Results of the Trial

Table 6. Metrics of study engagement

	Control (eMarket Place) (N=601)	Warning message (eMarket Place) (N=600)	Seller badge (eMarket Place) (N=600)	Control (Goodies) (N=599)	Warning message (Goodies) (N=600)	Seller badge (Goodies) (N=600)	Overall (N=3600)
Percentage scrolled down on product pages (percentage)[9]							
Mean (SD)	63.5 (31.4)	64.9 (31.3)	64.9 (31.0)	69.2 (26.6)	69.4 (26.4)	71.5 (25.9)	67.3 (29.0)
Median [Min, Max]	61.4 [5.41, 100]	66.4 [6.12, 100]	64.5 [6.14, 100]	68.7 [10.3, 100]	68.3 [9.56, 100]	73.8 [14.5, 100]	68.0 [5.41, 100]
Time spent on product pages (second)							
Mean (SD)	31.7 (66.0)	31.0 (43.6)	31.6 (49.3)	23.8 (41.9)	25.5 (54.1)	27.5 (51.1)	28.5 (51.7)
Median [Min, Max]	15.0 [2.00, 2200]	16.0 [5.00, 627]	16.0 [5.00, 949]	13.0 [2.00, 1590]	13.0 [5.00, 2270]	14.0 [5.00, 1370]	15.0 [2.00, 2270]
Time spent on checkout page (second)							

[9] Percentage of product page shown was derived from adding the height of the hidden part of the page on top and the height of the currently shown part of the page. The sum was then divided by the height of the whole page to get the percentage.

	Control (eMarket Place) (N=601)	Warning message (eMarket Place) (N=600)	Seller badge (eMarket Place) (N=600)	Control (Goodies) (N=599)	Warning message (Goodies) (N=600)	Seller badge (Goodies) (N=600)	Overall (N=3600)
Mean (SD)	23.9 (24.7)	24.4 (36.3)	23.6 (26.6)	21.6 (27.9)	22.5 (29.5)	23.2 (26.9)	23.2 (28.9)
Median [Min, Max]	17.0 [4.00, 413]	17.0 [4.00, 974]	17.0 [4.00, 467]	15.0 [3.00, 883]	16.0 [4.00, 725]	16.0 [3.00, 443]	16.0 [3.00, 974]
Completion time (seconds)							
Mean (SD)	696 (672)	820 (1760)	709 (775)	583 (472)	796 (2880)	763 (1450)	728 (1570)
Median [Min, Max]	498 [180, 5550]	554 [157, 37800]	514 [176, 9700]	460 [149, 6580]	494 [170, 68400]	500 [188, 29500]	502 [149, 68400]
Completion time < 40% of median							
No	597 (99.3%)	597 (99.5%)	595 (99.2%)	592 (98.8%)	597 (99.5%)	594 (99.0%)	3572 (99.2%)
Yes	4 (0.7%)	3 (0.5%)	5 (0.8%)	7 (1.2%)	3 (0.5%)	6 (1.0%)	28 (0.8%)
Device type							
Smartphone	319 (53.1%)	314 (52.3%)	316 (52.7%)	295 (49.2%)	296 (49.3%)	318 (53.0%)	1858 (51.6%)
Desktop	250 (41.6%)	255 (42.5%)	254 (42.3%)	259 (43.2%)	271 (45.2%)	250 (41.7%)	1539 (42.8%)

	Control (eMarket Place) (N=601)	Warning message (eMarket Place) (N=600)	Seller badge (eMarket Place) (N=600)	Control (Goodies) (N=599)	Warning message (Goodies) (N=600)	Seller badge (Goodies) (N=600)	Overall (N=3600)
Tablet	32 (5.3%)	31 (5.2%)	30 (5.0%)	45 (7.5%)	33 (5.5%)	32 (5.3%)	203 (5.6%)

Table 7. Confidence that product safety had been checked

How confident were you that the safety of the product you purchased on [eMarketPlace/ Goodies] had been checked?	Control (eMarket Place) (N=601)	Warning message (eMarket Place) (N=600)	Seller badge (eMarket Place) (N=600)	Control (Goodies) (N=599)	Warning message (Goodies) (N=600)	Seller badge (Goodies) (N=600)	Overall (N=3600)
1 - not at all confident	15 (2.5%)	42 (7.0%)	17 (2.8%)	14 (2.3%)	40 (6.7%)	15 (2.5%)	143 (4.0%)
2	11 (1.8%)	28 (4.7%)	20 (3.3%)	15 (2.5%)	30 (5.0%)	14 (2.3%)	118 (3.3%)
3	21 (3.5%)	47 (7.8%)	33 (5.5%)	24 (4.0%)	59 (9.8%)	38 (6.3%)	222 (6.2%)
4	119 (19.8%)	127 (21.2%)	115 (19.2%)	141 (23.5%)	130 (21.7%)	125 (20.8%)	757 (21.0%)
5	193 (32.1%)	156 (26.0%)	187 (31.2%)	202 (33.7%)	166 (27.7%)	177 (29.5%)	1081 (30.0%)
6	138 (23.0%)	122 (20.3%)	133 (22.2%)	127 (21.2%)	104 (17.3%)	142 (23.7%)	766 (21.3%)
7 - extremely confident	104 (17.3%)	78 (13.0%)	95 (15.8%)	76 (12.7%)	71 (11.8%)	89 (14.8%)	513 (14.3%)

Table 8. Results of testing hypotheses based on the main model with a set of covariates added*

Hypothesis	Estimated difference	*p*-value (with Bonferroni adjustment for testing multiple hypotheses)	95% family-wise confidence interval
eMarketPlace: Warning message - Control	-0.46	< .001	[-0.68, -0.25]
eMarketPlace: Verified Seller Badge - Control	-0.11	1.000	[-0.33, 0.10]
Goodies: Warning message - Control	-0.38	< .001	[-0.59, -0.17]
Goodies: Verified Seller Badge - Control	0.06	1.000	[-0.15, 0.27]
(eMarketPlace: Warning message - Control) - (Goodies: Warning message - Control)	-0.08	1.000	[-0.38, 0.22]
(eMarketPlace: Verified Seller Badge - Control) - (Goodies: Verified Seller Badge - Control)	-0.17	0.856	[-0.47, 0.13]

*This table shows the estimates from simultaneous tests for six general linear hypotheses based on an OLS model with a set of covariates, including age band, gender, region, ethnicity, education, device, and frequency of browsing online marketplaces in the past three months. All the covariates were included as categorical variables with levels shown in Table 3 - Table 6.

Table 9. Results of testing hypotheses based on the ordered probit model*

Hypothesis	Estimated difference	*p*-value (with Bonferroni adjustment for multiple hypotheses testing)	95% family-wise confidence interval
eMarketPlace: Warning message - Control	-0.32	< .001	[-0.47, -0.16]
eMarketPlace: Verified Seller Badge - Control	-0.09	0.846	[-0.24, 0.06]
Goodies: Warning message - Control	-0.25	< .001	[-0.40, -0.10]
Goodies: Verified Seller Badge - Control	0.04	1.000	[-0.11, 0.20]
(eMarketPlace: Warning message - Control) - (Goodies: Warning message - Control)	-0.07	1.000	[-0.28, 0.15]
(eMarketPlace: Verified Seller Badge - Control) - (Goodies: Verified Seller Badge - Control)	-0.13	0.713	[-0.35, 0.08]

*This table shows the estimates from simultaneous tests for six general linear hypotheses based on an ordered probit model with no covariates.

Table 10. Attitudes towards product safety risks on online marketplace

To what extent, if at all, do you agree or disagree with the following statements? Products bought on online marketplaces have more safety risks than products bought in shops.	Control (eMarket Place) (N=601)	Warning message (eMarket Place) (N=600)	Seller badge (eMarket Place) (N=600)	Control (Goodies) (N=599)	Warning message (Goodie) (N=600)	Seller badge (Goodie) (N=600)	Overall (N=3600)
Strongly agree	65 (10.8%)	78 (13.0%)	52 (8.7%)	45 (7.5%)	56 (9.3%)	47 (7.8%)	343 (9.5%)
Agree	196 (32.6%)	194 (32.3%)	183 (30.5%)	215 (35.9%)	208 (34.7%)	220 (36.7%)	1216 (33.8%)
Neither agree nor disagree	239 (39.8%)	246 (41.0%)	279 (46.5%)	259 (43.2%)	272 (45.3%)	244 (40.7%)	1539 (42.8%)
Disagree	87 (14.5%)	73 (12.2%)	71 (11.8%)	70 (11.7%)	57 (9.5%)	77 (12.8%)	435 (12.1%)
Strongly disagree	14 (2.3%)	9 (1.5%)	15 (2.5%)	10 (1.7%)	7 (1.2%)	12 (2.0%)	67 (1.9%)

Table 11. Recall of seeing different elements (including interventions) in the shopping task

Which of the following do you recall seeing on any of the product pages (including any pop-up) shown to you? Please select all that apply.	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)
An icon with the text "Verified Seller"	95 (15.8%)	96 (16.0%)	109 (18.2%)	93 (15.5%)	105 (17.5%)	179 (29.8%)
Warning message saying "This product is sold by a third party seller. [eMarketPlace/Goodies] has not verified the product safety checks that the seller has done on this product."	44 (7.3%)	360 (60.0%)	41 (6.8%)	54 (9.02%)	351 (58.5%)	51 (8.5%)
The seller’s name	145 (24.1%)	121 (20.2%)	121 (20.2%)	239 (39.9%)	273 (45.5%)	305 (50.8%)
Brand name of the product	264 (43.9%)	264 (44.0%)	252 (42.0%)	224 (37.4%)	228 (38.0%)	235 (39.2%)
The country of origin of the product or location of seller	55 (9.2%)	50 (8.3%)	48 (8.0%)	174 (29.1%)	172 (28.7%)	188 (31.3%)

Which of the following do you recall seeing on any of the product pages (including any pop-up) shown to you? Please select all that apply.	**Control (eMarketPlace) (N = 601)**	**Warning message (eMarketPlace) (N = 600)**	**Seller badge (eMarketPlace) (N = 600)**	**Control (Goodies) (N = 599)**	**Warning message (Goodies) (N = 600)**	**Seller badge (Goodies) (N = 600)**
The product’s Trustpilot rating	120 (20.0%)	114 (19.0%)	114 (19.0%)	97 (16.2%)	122 (20.3%)	98 (16.3%)
The name of the courier company responsible for delivery	39 (6.50%)	41 (6.8%)	28 (4.7%)	38 (6.3%)	42 (7.0%)	56 (9.3%)
None of these (exclusive)	64 (10.7%)	29 (4.8%)	63 (10.5%)	49 (8.2%)	18 (3.0%)	36 (6.0%)
Don't remember (exclusive)	157 (26.1%)	78 (13.0%)	172 (28.7%)	141 (23.5%)	82 (13.7%)	118 (19.7%)

Table 12. Recall of seeing different elements (including interventions) in the shopping task (excluding participants choosing ringer options)*

Which of the following do you recall seeing on any of the product pages (including any pop-up) shown to you? Please select all that apply.	Control (eMarketPlace) (N = 454)	Warning message (eMarketPlace) (N = 458)	Seller badge (eMarketPlace) (N = 466)	Control (Goodies) (N = 476)	Warning message (Goodies) (N = 455)	Seller badge (Goodies) (N = 461)
An icon with the text "Verified Seller"	54 (11.9%)	53 (11.6%)	69 (14.8%)	55 (11.6%)	62 (13.6%)	121 (26.2%)
Warning message saying "This product is sold by a third party seller. [eMarketPlace/Goodies] has not verified the product safety checks that the seller has done on this product."	30 (6.6%)	275 (60.0%)	21 (4.5%)	36 (7.6%)	264 (58.0%)	27 (5.9%)
The seller’s name	92 (20.3%)	80 (17.5%)	89 (19.1%)	171 (35.9%)	188 (41.3%)	217 (47.1%)
Brand name of the product	188 (41.4%)	174 (38.0%)	179 (38.4%)	158 (33.2%)	153 (33.6%)	154 (33.4%)
The name of the courier company responsible for delivery	35 (7.7%)	29 (6.3%)	29 (6.2%)	132 (27.7%)	120 (26.4%)	141 (30.6%)

Which of the following do you recall seeing on any of the product pages (including any pop-up) shown to you? Please select all that apply.	**Control (eMarketPlace) (N = 454)**	**Warning message (eMarketPlace) (N = 458)**	**Seller badge (eMarketPlace) (N = 466)**	**Control (Goodies) (N = 476)**	**Warning message (Goodies) (N = 455)**	**Seller badge (Goodies) (N = 461)**
None of these (exclusive)	64 (14.1%)	29 (6.3%)	63 (13.5%)	49 (10.3%)	18 (4.0%)	36 (7.8%)
Don't remember (exclusive)	157 (34.6%)	78 (17.0%)	172 (36.9%)	141 (29.6%)	82 (18.0%)	118 (25.6%)

* Only participants who did not choose either of the two ringer options (“The product’s Trustpilot rating” and “The name of the courier company responsible for delivery”) (N = 2770) were included in this table.

Table 13. Interaction with elements on product pages*

If an element was clicked	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)
Badge	NA	NA	6	NA	NA	9
Warning message	NA	11	NA	NA	32	NA
Basket	278	350	318	298	416	351
Description	511	414	444	731	631	793
Disclaimer	37	38	27	40	35	53
Product picture	95	118	111	121	114	154
Rating	38	48	20	19	10	11
Seller information	6	18	9	5	3	8

* The numbers in this table indicate the total number of times an element was clicked by all participants in the condition across all nine product pages shown to them. “Badge” only appeared in seller badge conditions for three randomly chosen products for each participant, so the maximum possible number of times clicked was 3*600 = 1800 for the Seller badge (eMarketPlace) condition and likewise for Seller badge (Goodies). “Warning message” appeared in the warning message conditions for all nine products for each participant, so the maximum possible number of times clicked was 9*600 = 5400 for each of Warning message (eMarketPlace) and Warning message (Goodies). Participants could click the basket icon to see the three shortlisted products in each product category and click to see the full product description on all product pages. Similarly, participants could click on the product picture, click on the product rating to go to the reviews, and click on the seller name to see more information about the seller, on all product pages. Therefore, for all five of these elements, the maximum possible number of times clicked was 9*N of the condition. There were disclaimers only on the product pages of the three toys, so the maximum possible number of times clicked for disclaimer was 3*N of the condition.

Table 14. Knowledge about third party seller and platform role in verifying product safety checks

Please select whether each of the following statements is true or false.	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)
Some products sold on [eMarketPlace/Goodies] are sold by third party sellers.						
True - Correct answer	416 (69.2%)	538 (89.7%)	409 (68.2%)	298 (49.7%)	507 (84.5%)	313 (52.2%)
False	6 (1.0%)	4 (0.7%)	11 (1.8%)	20 (3.3%)	6 (1.0%)	15 (2.5%)
Don't know/Can't remember	179 (29.8%)	58 (9.7%)	180 (30.0%)	281 (46.9%)	87 (14.5%)	272 (45.3%)
[eMarketPlace/Goodies] verifies the product safety checks for all products sold on the platform.						
True	210 (34.9%)	160 (26.7%)	215 (35.8%)	211 (35.2%)	168 (28.0%)	224 (37.3%)
False - correct answer	68 (11.3%)	203 (33.8%)	72 (12.0%)	38 (6.3%)	188 (31.3%)	42 (7.0%)
Don't know/Can't remember	323 (53.7%)	237 (39.5%)	313 (52.2%)	350 (58.4%)	244 (40.7%)	334 (55.7%)

Please select whether each of the following statements is true or false.	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)
All products sold on [eMarketPlace/Goodies] are sold by sellers based in the UK.*						
True	60 (14.4%)	66 (12.3%)	63 (15.4%)	87 (29.2%)	118 (23.3%)	90 (28.8%)
False	194 (46.6%)	225 (41.8%)	197 (48.2%)	56 (18.8%)	101 (19.9%)	53 (16.9%)
Don't know/Can't remember	162 (38.9%)	247 (45.9%)	149 (36.4%)	155 (52.0%)	288 (56.8%)	170 (54.3%)

* This question was only shown to participants who chose “True” to the statement "Some products sold on eMarketPlace/Goodies are sold by third party sellers.", and the response distribution was calculated for this subset of participants.

Table 15. Factors considered when choosing a product in the shopping task

Which, if any, of these did you take into account when choosing a product on [eMarketPlace/Goodies]? Please select all that apply	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)
Purchase price	443 (73.7%)	451 (75.2%)	477 (79.5%)	452 (75.5%)	432 (72.0%)	438 (73.0%)
Product quality (other than safety)	402 (66.9%)	387 (64.5%)	408 (68.0%)	374 (62.4%)	336 (56.0%)	370 (61.7%)
Product safety	226 (37.6%)	233 (38.8%)	198 (33.0%)	173 (28.9%)	178 (29.7%)	183 (30.5%)
Warranty / money back guarantee	121 (20.1%)	120 (20.0%)	100 (16.7%)	101 (16.9%)	99 (16.5%)	122 (20.3%)
Speed of delivery	173 (28.8%)	157 (26.2%)	170 (28.3%)	213 (35.6%)	216 (36.0%)	232 (38.7%)
None of these (exclusive)	35 (5.8%)	30 (5.0%)	25 (4.2%)	46 (7.7%)	49 (8.2%)	47 (7.8%)
Don’t know (exclusive)	1 (0.2%)	8 (1.3%)	3 (0.5%)	6 (1.0%)	6 (1.0%)	4 (0.7%)

Table 16. Ways of identifying safety of products purchased in the shopping task

	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)
How did you identify whether the safety of the product you purchased on [eMarketPlace/Goodies] had been checked? Please select all that apply.						
Checked if the seller was based in the UK	93 (15.5%)	94 (15.7%)	74 (12.3%)	141 (23.5%)	152 (25.3%)	132 (22.0%)
Checked for the [eMarketPlace/Goodies] Verified Seller Badge	NA	NA	96 (16.0%)	NA	NA	120 (20.0%)
Checked if the price looked sensible	186 (30.9%)	195 (32.5%)	176 (29.3%)	166 (27.7%)	184 (30.7%)	172 (28.7%)
Checked reviews or star ratings	314 (52.2%)	307 (51.2%)	284 (47.3%)	243 (40.6%)	263 (43.8%)	268 (44.7%)
Searched online for information about the product, brand or the seller	64 (10.6%)	70 (11.7%)	48 (8.0%)	47 (7.8%)	47 (7.8%)	47 (7.8%)
Looked for product safety information or warnings in the product description	195 (32.4%)	211 (35.2%)	160 (26.7%)	155 (25.9%)	168 (28.0%)	131 (21.8%)

	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)
Another way	4 (0.7%)	3 (0.5%)	5 (0.8%)	9 (1.5%)	10 (1.7%)	4 (0.7%)
I did not try to identify whether the safety of the product had been checked (exclusive)	157 (26.1%)	146 (24.3%)	168 (28.0%)	193 (32.2%)	167 (27.8%)	187 (31.2%)
What was the main way you identified whether the safety of the product you purchased on [eMarketPlace/Goodies] had been checked?						
Checked if the seller was based in the UK	27 (4.5%)	27 (4.5%)	17 (2.8%)	62 (10.4%)	55 (9.2%)	53 (8.8%)
Checked for the [eMarketPlace/Goodies] Verified Seller Badge	NA	NA	46 (7.7%)	NA	NA	54 (9.0%)
Checked if the price looked sensible	63 (10.5%)	55 (9.2%)	57 (9.5%)	62 (10.4%)	78 (13.0%)	63 (10.5%)
Checked reviews or star ratings	230 (38.3%)	216 (36.0%)	209 (34.8%)	164 (27.4%)	169 (28.2%)	150 (25.0%)

	Control (eMarketPlace) (N = 601)	**Warning message (eMarketPlace) (N = 600)**	**Seller badge (eMarketPlace) (N = 600)**	**Control (Goodies) (N = 599)**	**Warning message (Goodies) (N = 600)**	**Seller badge (Goodies) (N = 600)**
Searched online for information about the product, brand or the seller	23 (3.8%)	27 (4.5%)	23 (3.8%)	15 (2.5%)	18 (3.0%)	16 (2.7%)
Looked for product safety information or warnings in the product description	99 (16.5%)	128 (21.3%)	78 (13.0%)	99 (16.5%)	108 (18.0%)	74 (12.3%)
Another way	2 (0.3%)	1 (0.2%)	2 (0.3%)	4 (0.7%)	5 (0.8%)	3 (0.5%)
I did not try to identify whether the safety of the product had been checked (exclusive)	157 (26.1%)	146 (24.3%)	168 (28.0%)	193 (32.2%)	167 (27.8%)	187 (31.2%)

Table 17. Products chosen to be checked out with*

Product chosen to be checked out with	Control (eMarketPlace) (N = 601)	Warning message (eMarketPlace) (N = 600)	Seller badge (eMarketPlace) (N = 600)	Control (Goodies) (N = 599)	Warning message (Goodies) (N = 600)	Seller badge (Goodies) (N = 600)
Glove 1	199 (33.1%)	203 (33.8%)	227 (37.8%)	195 (32.6%)	185 (30.8%)	201 (33.5%)
Glove 2	199 (33.1%)	212 (35.3%)	185 (30.8%)	199 (33.2%)	193 (32.2%)	204 (34.0%)
Glove 3	203 (33.8%)	185 (30.8%)	188 (31.3%)	205 (34.2%)	222 (37.0%)	195 (32.5%)
Lamp 1	187 (31.1%)	195 (32.5%)	192 (32.0%)	190 (31.7%)	191 (31.8%)	185 (30.8%)
Lamp 2	213 (35.4%)	178 (29.7%)	193 (32.2%)	196 (32.7%)	212 (35.3%)	198 (33.0%)
Lamp 3	201 (33.4%)	227 (37.8%)	215 (35.8%)	213 (35.6%)	197 (32.8%)	217 (36.2%)
Toy 1	200 (33.3%)	182 (30.3%)	210 (35.0%)	187 (31.2%)	215 (35.8%)	194 (32.3%)
Toy 2	201 (33.4%)	211 (35.2%)	189 (31.5%)	208 (34.7%)	187 (31.2%)	205 (34.2%)
Toy 3	200 (33.3%)	207 (34.5%)	201 (33.5%)	204 (34.1%)	198 (33.0%)	201 (33.5%)

* Each participant chose one of the three products (i.e., gloves, lamps or toys) to check out with within each product category; therefore, for each column of the table, the counts of the three products in the same product category add up to the number of participants in the corresponding condition. The percentages were calculated within each product category (instead of across all nine products), so the percentages add up to 100 among products in the same product category.

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Table 18. Effect of seeing warning message on purchase decisions*

You said you saw a warning message saying "This product is sold by a third party seller. [eMarketPlace/Goodies] has not verified the product safety checks that the seller has done on this product." on the product page. Did this influence your decision about whether to purchase that product or not?	**Warning message (eMarketPlace) (N=360)**	**Warning message (Goodies) (N=351)**
Yes	94 (26.1%)	82 (23.4%)
No	154 (42.8%)	156 (44.4%)
Not sure/Don't know	112 (31.1%)	113 (32.2%)

* This question was only shown to participants who correctly recalled seeing the warning message, and this table was based on this subset of participants (N = 711).

Table 19. Effect of seeing the verified seller badge on purchase decisions*

You said you saw an icon with the text "Verified Seller" on the product page. Did this influence your decision about whether to purchase that product or not?	Seller badge (eMarketPlace) (N=109)	Seller badge (Goodies) (N=179)
Yes	58 (53.2%)	94 (52.5%)
No	20 (18.3%)	39 (21.8%)
Not sure/Don't know	31 (28.4%)	46 (25.7%)

* This question was only shown to participants who correctly recalled seeing the verified seller badge, and this table was based on this subset of participants (N = 288).

Appendix 3 Rapid Evidence Assessment

Methodology

The research team conducted a rapid evidence assessment (REA) to review existing research relating to consumer behaviour in online shopping environment, which helped inform the generation of ideas of potential interventions to be pre-tested in the qualitative interviews. In particular, the REA looked for evidence around (1) how to best draw attention and communicate information (in terms of presentation and placement), and (2) what affects consumers' perception of product safety risks and purchase decisions, in an online marketplace environment.

To achieve this, the REA began by searching for relevant papers on Google Scholar using search terms like "online marketplace," "alert/warning message," and "consumer behaviour/salience/attention." The search also involved checking the references of important papers for additional relevant papers. The initial search suggested a lack of research that directly addressed the two questions, so the search was extended in two directions: to include research on how to draw user attention, convey information and influence user behaviour in online environments beyond online marketplaces, and to include research on perception of product safety risks in various types of scenarios. The research team then examined the abstracts of the papers found to determine if a paper was indeed informative about the questions of the REA.

There was not much literature that answered the research questions found via the search. 18 papers were identified as relevant, including three papers shared by OPSS, of which two were unpublished. The research team then reviewed the 18 papers in detail and extracted key information into a summary table, including hypotheses, outcome measures, study method (including product categories and type of online environment studied), and main results.

The REA stage also included looking at the policy report provided by OPSS (Office for Product Safety and Standards, 2021d) to better understand the emerging challenges around new e-commerce models and the related policy context and referred to the 'Safety Checklist' (Office for Product Safety and Standards, 2021a) to understand potential actions consumers could take regarding product safety risks on online marketplaces. The research team also checked the product safety alerts and recalls page on government website (Office for Product Safety and Standards, 2021b, 2021c) to understand which products were most relevant to product safety on online marketplaces and what sorts of risks they had, which further informed the product choices and intervention design in both the interview (including pre-testing) and trial stage.

Evidence regarding effective placement and presentation of information online

The evidence reviewed suggested several ways of placing and presenting information in an online environment that could be effective in drawing attention and affecting decisions:

- **visual cues** (e.g., "Bestseller" badge on Amazon search pages) marginally increased viewing duration, reduced decision time, and led to a higher probability of choosing the corresponding product (Beşer, Sengewald and Lackes, 2022).
- **a list layout of products** on an E-commerce website triggered significantly more eye-fixations, was associated with lower cognitive load and more economic product selections compared to a matrix layout; items were generally fixated from top to

bottom with longer fixation for items on the top with a list layout, and items were scanned from left to right and top to bottom in a matrix presentation (Schmutz *et al.* 2010).

- **the usage of images and numbers** helped increase salience (Adams and Office for Product Safety and Standards, no date).
- **gaze cuing**, i.e., a human face looking towards a specific region, could be an effective tool for driving viewers' attention toward specific elements on an online shopping page, even shaping consumers' intentions to purchase a certain product (Palcu, Sudkamp and Florack, 2017).
- **animation in ads and banners** had mixed evidence of effectiveness compared to static ads and banners: in one study participants looked longer at the banner advertisement on a fictional online shopping page when it contained an animated face than when it contained a static face (Palcu, Sudkamp and Florack, 2017); however, another found that static ads drew users' eyes more frequently and for longer periods of time than ads with animation (Lee and Ahn, 2014).

Finally, Gao *et al* (2012) pointed out that "online shoppers could be easily confused when facing rich information, particularly when the amount of information greatly exceeded their processing capacity". They found that consumers had higher satisfaction when processing the information in an unconscious thought mode rather than a conscious thought mode, especially for complex situations with products that involved a large amount of uncertain information.

Evidence regarding factors affecting risk perceptions and purchase intention

Jenkins, Harris and Osman (2021) identified two main components of consumer risk perceptions–"dread" and "knowledge"–which explained 81% of the variance in risk perceptions of food-related hazards. Jenkins and Lachlan (2021) expanded the research to include a range of products and found that risk perceptions could be explained by three main components: benefits, dread, and responsibility (of the individual compared to external parties). Moreover, they provided evidence that higher dread levels prompted people to seek and share risk information.

Risk perception may be connected to seller choice, via trust. In an online survey, Hong (2015) found that when products were important to students, that was associated with a higher perception of five different measures of risk, but only 'product performance risk' (the likelihood of problems associated with purchasing unfamiliar brands or defective products) was associated with trust in the seller. Trust in the seller was predictive of (hypothetical) choice.

Sellers are capable of directly influencing buyers' risk perceptions, especially around 'intermediary risk' (the potential failure of formal control mechanisms employed by the online marketplace), by providing more appropriate information about themselves (i.e., seller information) and about their products (i.e., product information) (Meents, Verhagen and Vlaar, 2011). Quality of information and service level provided by the seller may also influence risk perception (Kim, Xu and Koh, 2004). Online sellers often try to signal their quality to new consumers by ensuring their website interface has good usability (Pee, Jiang and Klein, 2018). This can be more effective when the perceived risk of a purchase is high and for less experienced shoppers (Pee, Jiang and Klein, 2018).

However, external signals provided by third parties may be more influential than information provided by the seller. In a large Chinese e-marketplace, warranties had the largest impact on sales performance, followed by overall rating, mean detailed seller rating, percent of positive ratings, and website quality (Li *et al.*, 2015). Similarly, in an online survey on the website of a bookstore, buyer's 'second-hand information', i.e., what they reported other people had said about the store, was associated with trust in the bookstore (Kim, Xu and Koh, 2004).

Evidence regarding effective ways of intervening on consumer behaviour in online shopping

Several studies provided further insights into potential ways to influence consumers' risk perception and related behaviour when shopping online.

- a meta-analysis on nudge-based interventions to reduce online impulse buying among young adults suggested several effective nudges including "save for later" **options automatically presented at the moment of purchase**, and **a visual pop-up message displayed at the moment of purchase** that helped users to contextualise the object to be purchased (Mandolfo, 2022).
- a lab experiment found that **emotive warning messages** and **placing incompatibility information at the checkout page** rather than earlier in the purchasing process were effective in reducing the purchase of digital products that were 'incompatible' with (i.e. could not be used with) the devices owned by consumers (Esposito *et al.*, 2017).
- **A pop-up textbox with forced-choice options** could be effective in directing people towards desired behaviours (utilising charity features) on an e-commerce platform (Meske, Amojo and Mohr, 2020).
- **A 'company-favoured choice'** increased choice intention during the pre-purchase and purchase phase, while **decoy effect** and **social norms** had a significant impact on choice intention only in the pre-purchase phase (Koch, Frischlich and Lermer, 2021).
- the effectiveness of product safety information messaging may be enhanced by **evoking emotion**, **using defaults**, incorporating **social norms** and **goal framing** elements, using **narrative** and **autonomy-restoring tones**, and complex choices in Adams and Office for Product Safety and Standards (no date).

Appendix 4 Seller Experiences of Online Marketplaces

Introduction

The Office for Product Standards and Safety (OPSS) is the UK Government's national product safety regulator for a wide range of products.

OPSS is collecting evidence in the space of online marketplaces[10] and commissioned Woodnewton to design and deliver a piece of qualitative research to provide valuable insights into the experiences of sellers on online marketplaces. The main aims of the research are to understand how sellers engage with these online marketplaces, their attitudes to selling and their responsibilities when selling, with a particular focus on consumer rights and product safety.

Online marketplaces are a priority area for OPSS. This research will aim to improve OPSS understanding of what sellers on online marketplaces understand about product safety.

This document presents the findings of the research. The next section outlines the methodology, and the subsequent chapters present findings around the following themes:

- **Online Marketplace Sellers**: explaining why people sell online and how these participants can mostly be categorised as either amateur or professional sellers.
- **Consumer Rights**: highlighting the importance of a customer's right to return products as the main driver of how sellers view their relationships with buyers, and the impact this has on views about product safety.
- **Product Safety**: setting out that many sellers think product safety is assumed, though some take extra care depending on the type of merchandise.
- **Marketplace Support**: showing that sellers have low recall of receiving support from marketplaces around product safety, but this may reflect the salience of safety as impacting behaviour.

Methodology

A qualitative methodology was used in the form of 30 in-depth interviews with a range of different types of sellers. Woodnewton developed a topic guide (see Annex) to steer each discussion, which took on average 30 minutes to conduct. All interviews were moderated by senior Woodnewton research consultants and were undertaken by Zoom or telephone (as preferred by the research participant).

Woodnewton worked with its recruitment partner, Roots Research, to identify suitable participants and all participants were recruited as either sole traders or as sole-person businesses selling through online marketplaces. To ensure a broad spread of different types of sellers, minimum quotas were agreed (and met) to cover variables such as gender, age, location, frequency of selling and marketplaces used.

10 An online marketplace is a digital platform or website where third-party sellers offer goods and/or services directly to consumers. The marketplace facilitates transactions between buyers and sellers but typically does not own the inventory sold.

The profile of the research participants is shown below.

Count	Variable
14	Male
16	Female
20	England
3	Wales
3	Scotland
4	Northern Ireland
17	Sold items frequently most months
9	Sold items several times in last 3-4 months
4	Sold items 1-2 times in last 6 months
19	White British
4	Other White Background
7	Ethnic Minority

During recruitment, participants were asked to name the marketplaces that they currently or have previously used. These are:

- Amazon Marketplace
- Etsy
- AliExpress
- Shopify
- Vinted
- Ebay
- Wish
- Gumtree
- Facebook Marketplace
- Depop

A range of products, both new and second-hand, were sold by participants including:

- Baby products
- Candles
- Car phone mounts
- Clothes
- Cosmetics

- Craft kits
- DIY tools
- Exercise equipment
- Food (oil, cakes, sweets)
- Food supplements
- Furniture
- Hair accessories
- Household Items
- Phone chargers
- Plants
- Power banks
- Shoes
- Small electronics
- Stickers
- Toys

In each interview participants were asked to base their answers on the marketplace they feel most familiar with. Where we have named individual marketplaces in this report they are given as illustrative comments. These comments should not be regarded as an independent evaluation of how these marketplaces actually operate, given that such an assessment was not within the scope of this project.

Although participants were not recruited based on the types of goods they sell online, most sellers can be categorised into two groups. The first are 'amateur' sellers: those who primarily sell their own used goods in their spare time. The second are more 'professional' sellers: those who concentrate on either manufacturing or selling new goods, usually with much greater volume than amateur sellers. There is no firm boundary between the two groups, and we heard from participants who had moved from one to the other, but the differences in attitudes and behaviour of these two groups with respect to product safety were explored in this research.

Throughout the report we show verbatim comments from the discussions to provide examples of how participants explain their attitudes and behaviours. In addition, anonymised summaries of each discussion have been provided to the client and 24 of the 30 participants also agreed to have their name and email address supplied to OPSS for the purposes of future research on this topic. To maintain confidentiality, these names and email addresses have been separated from the discussion summaries.

Fieldwork for this research was conducted between 8th and 22nd June 2022.

Research Findings

The reasons why people sell through online marketplaces are common across amateur and professional sellers. The convenience of being able to sell online, both in terms of how the process works and the ability to use marketplaces as often as sellers wish, are frequently given as benefits of online marketplaces.

Participants say they can reach a wider audience compared to 'offline' selling and the overheads of online selling are considerably lower than doing so in other ways.

> *"The platforms are quite good. I can reach a wider audience. I like the simplicity of the platforms and it's easy to do in my free time. Just more convenient." (Male, 18-34 years)*

"I sell online for the reach, because a lot of people shop online these days and with social media and things it's like free advertising really so it's easy to reach a large customer base. It's also easy for me. I wouldn't be able to afford a shop and things like that so to be able to upload things online cheaply or for free is great." (Female, 18-34 years)

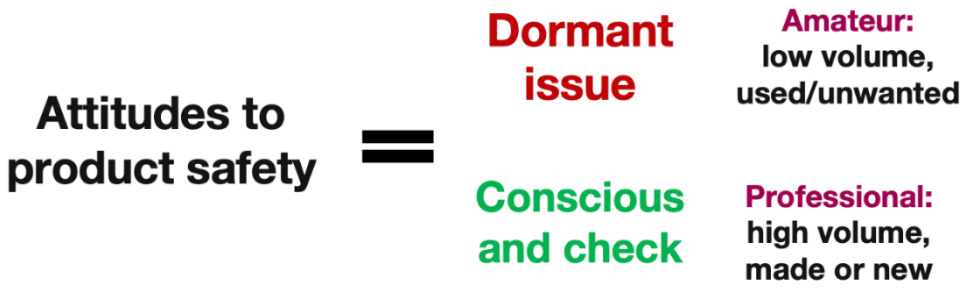
Most participants we interviewed have tried multiple marketplaces, but they tend to concentrate on using one platform based on the type of product they sell and the type of audience they are aiming to sell to. Personal preferences on the ease of use of the platform also plays a part in determining which marketplace to sell through.

"Mainly eBay, I was using Facebook marketplace but they changed the rules so you couldn't sell food type products, and these are classed as food type products so I can't do Facebook marketplace anymore." (Female, 18-34 years)

Nearly everyone interviewed say they began selling online because they were trying to sell unwanted or used goods and/or to earn some additional income. Some have continued to do this, and they see themselves as 'amateur' sellers who can experience different sales levels from month to month. Others have been able to develop their experiences into more 'professional' sellers, concentrating on shipping a higher volume of goods. Interestingly, even most of these tended to sell through marketplaces to supplement other income and did not rely on it as their main source of work.

Across both groups, participants for the most part concentrate on selling product categories they are familiar with – for example, clothes or cosmetics. Very few seem to have a broad range of goods they sell or frequently try to sell other types of items (although even when specialising, they might occasionally sell other types of items which they owned personally and no longer wanted). This is significant for how people therefore think about product safety, as sellers feel familiar with what they are selling and, as such, feel confident that what they sell is safe.

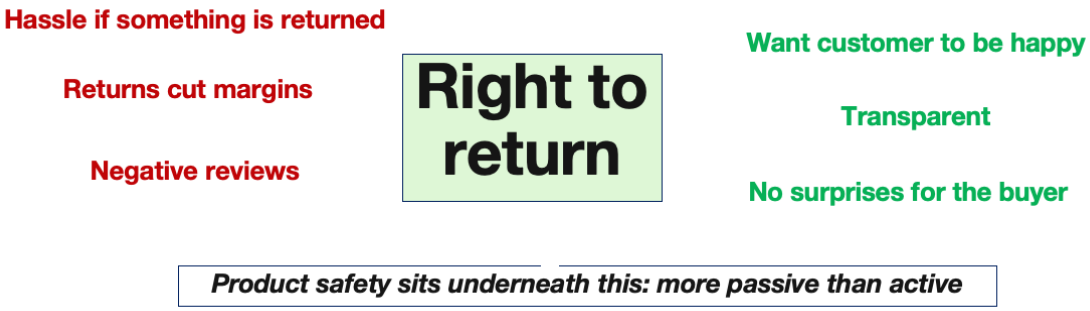
As the diagram below illustrates, sellers' views on product safety can be categorised into two groups. There are those for whom product safety is a dormant issue in that they tend not to give safety much consideration and assume what they are selling is safe. Amateur sellers would mostly be in this group. The professional sellers are more conscious of safety requirements because of the type of products they sell – safety is not necessarily top of mind for them, but it is something that they understand needs to be checked.



We explore views on product safety in more detail below.

Consumer Rights

In the interview discussions, before asking participants about their attitudes to product safety, we talked about their roles and responsibilities around the rights of the consumers/customers who bought from them through online marketplaces. No-one we talked to at this point explicitly mentioned product safety. Instead, their focus was on buyers' right to return products as the core element in consumer rights, as illustrated by the diagram below.



The right of a buyer to return a product is a very powerful driver for how sellers use online marketplaces. It means that sellers strive hard to make sure that the customer is happy with their purchase, because if they are not products may be returned or be replaced and this would reduce their profit. The fact that most marketplaces allow buyers to leave a review on the seller means that sellers try hard to maintain positive ratings.

"One time I sold a jumper on Depop – I didn't spot the stains on the sleeves, so these were not included in the description. I got a bad review. Not asked for a refund. Definitely important to get good reviews – and also to avoid selling anything damaged." (Female, 24 years)

"Customers can write reviews – nothing I can do. 100% really important to have 4.5 or 5 star – site is so competitive." (Male, 23 years)

"Buyers can review you and give you ratings. So, you have a vested interest to properly describe what you are selling." (Female, 18-34 years)

"I've had problems where I'm forced to refund items just to protect my 100% rating." (Male, 35+ years)

Given this, there is a very strong incentive for sellers to be as clear and transparent as possible when they sell goods so that the buyer is not surprised or disappointed with their purchase. The marketplaces themselves encourage sellers to act in this way.

"Customers have the right to know what's in the product and how it is made. The bottle/container has labels which explains ingredients (e.g., almond oil)." (Male, 18-34 years)

"Transparency - customers have the right to know what product they're buying and receive the product as described. If they have an issue, they

have the right to ask for a replacement or discount. As the seller I get a chance to rectify the mistake." (Female, 18-34 years)

"I try to be as transparent as possible, as some goods I sell are new, some second hand. I tell people where they come from and what it is." (Male, 35+ years)

Although participants do not explicitly link the need to be transparent with ensuring product safety, there is a link with product quality and product safety. Participants avoid selling anything that is broken or could easily be damaged in the post, and there is a general attitude of "would I be happy to receive this product?" that means that sellers may be taking product safety into account through product quality, if not through technical compliance.

Sellers therefore rely most on the marketplaces themselves to let buyers know what their rights are, as well as relevant information in terms of returns policy in the product description. We found only a couple of examples of sellers themselves being more proactive than this about informing customers of their rights.

Product Safety

The following diagram summarises sellers' attitudes towards product safety. The most common view is that the products sold are safe and most give little thought or feel they need to do more than check the product is not damaged or broken. This is the most common view among amateur sellers, but also applies to many professional sellers. Some – particularly professional sellers – are more conscious of checking safety, but this is mainly driven by the type of product, or the ingredients used if they also manufacture goods.

It is rare for people to take the view that all the responsibility for safety is on the buyer and once a good is bought it is the "buyer's problem". However, most participants do not explicitly talk about product safety when they explain their responsibilities as a seller or in how they describe customer rights. This is not because they feel that product safety is unimportant or that they knowingly sell unsafe products. Instead, the most common view is that the products they sell are safe. This view is driven by the following attitudes:

- Goods are intrinsically safe / there are no safety issues with these types of products
- Seller has personally used them
- Goods are not broken or have not been modified since they were initially purchased

- Goods look safe and the seller would be happy to buy/use them
- Never had a problem before

"In my eyes, so long as the product works and it is described properly then it is OK to sell." (Male, 18-34 years)

"I just sell clothing so I feel like it's a wee bit different from other products, but maybe I could be more detailed about what I'm selling." (Female, 18-34 years)

"I'm not sure. I don't know. Other than not knowingly selling something dodgy." (Female, 18-34 years)

"I am unaware of any actual legal requirements to prove if the item is safe." (Male, 35+ years)

"I've sold a lot of things, e.g. weed killer, which would have a safety aspect and I've never thought about it. I've never had an issue with product safety so never really thought about it." (Female, 18-34 years)

Underpinning sellers' assumptions that products are safe is the view that products manufactured in the UK or Europe would be safe at the point of manufacture and so if they have not been damaged or significantly changed then they would be safe to sell on.

"I don't tamper with things I'm selling from the original state. Am reliant on who I buy off originally." (Female, 18-34 years)

Avoiding selling potentially dangerous goods

Most participants acknowledged that they would not buy and sell certain goods because of concerns around safety, feeling that the potential risks of harm with some products are too high or that they do not feel competent to properly assess if the product is properly safe. Examples given by participants of products they would avoid selling include:

- Electronics
- Children's toys
- Skincare products
- Food or drinks
- Health products and supplements
- Furniture or soft furnishings that did not have the right labels proving their fire resistance

Similarly, those who manufacture their own products provide examples of some ingredients they would avoid using because of safety concerns.

"I would stay away from anything which would have a reputation of being a bit too extreme. There are bad things out there that can cause certain side effects which I don't want to get involved in. I choose mid-range strength products that haven't had any issues with people's health. Anything with bad publicity I won't touch." (Male, 35+ years)

"I'm not allowed to include batteries in shipping because they can explode. So, I have to be careful with that." (Male, 35+ years)

Responsibilities

Those sellers who manufacture their own products, such as cosmetics, and/or sell products that may have a particular safety requirement are aware of their responsibilities to ensure the product they sell is safe. This includes clear and transparent labelling and, for some products, making sure they are independently tested. These types of sellers take their responsibilities seriously and participants provide several examples of how they ensure the products they sell through online marketplaces are safe.

"I try as much as possible to cover all eventualities. I'd hate to be responsible for injury or damage. I'm probably over cautious." (Female, 35+ years)

"Obviously food hygiene. I have all my certificates displayed and I update them every year. I have all the allergy information as well." (Female, 35+ years)

"Just to cover myself I have a warning and instruction leaflet included with the candles." (Female, 18-34 years)

"The UK law on cosmetic industry is very heavily regulated. For soaps – all we must do is list the ingredients and make sure the customer knows what they are. I have to send samples off to be tested every now and then to a governing body to provide quality assurance (Avon lab – they do my testing for me)." (Male, 18-34 years)

"I've got to make sure there's no harmful materials, especially since I'm making them myself. I don't market my stickers to children, so I don't have to make sure they're child safe." (Female, 18-34 years)

"I have to make sure that all my items have been tested – the paints, the wood – all tested and I've got the certificates for those, and then I do the UKCA testing to ensure that they're safe for children of a certain age." (Female, 18-34 years)

Most participants considered neither the manufacturer nor the seller to be most responsible for product safety. Many participants felt that both have a responsibility. The manufacturer is responsible for making sure the product is safe originally; and the seller checking that what they sell is safe. Though levels of knowledge of participants in this area differs.

"If I purchase a toy from x and it is brand new and in complete packaging – what is my responsibility? If not been opened then still part of manufacturing responsibilities by law, so my responsibility is to advertise and recopy the manufacturer's warnings (e.g., age guide, do not chew, etc)." (Male, 35+ years)

"I think if something happened the customer would come to me as the seller. For a new item I'd think the manufacturer. If you're altering the product in some way from the way it was originally intended like some sellers on Etsy that moves responsibility on to you." (Male, 18-34 years)

"In my opinion the person that creates the product is responsible for the quality." (Male, 35+ years)

"Obviously I'm selling, so the responsibility is with me. If it's still under warranty, and the item is faulty, they'll get a refund. I think it would be me. But I wouldn't sell anything unsafe knowingly." (Male, 35+ years)

"Manufacturer because they have made the product. Regardless of who buys or sells the product, if the product is at fault the manufacturer is blame." (Female, 35+ years)

"As far as I know, because I'm not manufacturing, it's all on the supplier. I'm just the middleman. I don't think I have any legal responsibility." (Male, 35+ years)

"I suppose it's the seller. If someone's buying something from you it comes down to you." (Female, 18-34 years)

"Responsibility is a cross between me and the manufacturer. More falls on me, I think. I chose children's clothes because I feel they are more regulated starting from the manufacturer. I try to deal only with trade assured manufacturers." (Female, 35+ years)

Participants were asked their views about online marketplaces' responsibility in respect to product safety, the quote below illustrating the consensus among participants' views on this subject.

"I wouldn't really feel as though the marketplace has much to do with that because that's just the platform and they are relying on you as a person selling on making to cover the safety aspects." (Female, 18-34 years)

Support from Marketplaces

Participants have very mixed views on the overall type of support they receive from online marketplaces. Some participants are very positive about how marketplaces help them to sell and the ease of getting in touch if they have a concern or problem. Others talk about how some platforms also provide standard descriptive text for products they upload or prompts to make sure necessary information about a product is supplied. Marketplaces such as eBay and Amazon are most frequently given as examples of platforms that provide this level of service to sellers.

Some participants are more critical of other platforms, either because sellers feel they lack support from the marketplace or because of the view that it is easy to sell "almost anything" without any checks or supervision. When asked about the type of support or information provided by these marketplaces, sellers recall information and advice about how to improve sales, remind sellers about customers' rights to return products and the need to be honest and transparent about what goods are being offered for sale.

There is very little recall of safety-specific information provided by marketplaces. However, participants acknowledge that their low recall might reflect the fact that safety is not highly salient for them when selling goods. Some suggest that the marketplaces they use may provide information, for example in their terms and conditions, but the seller is unlikely to read this type of information.

Furthermore, there is a broad consensus that if a seller wanted more information about their responsibilities around product safety that they would look to access it on the marketplace they use which some sellers reported to have robust guidance and a help function. Sellers would also look to access the information through online forums, or through Google searches and looking on gov.uk or the Trading Standards website.

"They have the support hub and they send regular emails to inform you and prompt you to read up on things. I don't really use it, but I know it's there when I need it. I've never had an issue in all the years." (Female, 18-34 years)

"It may be there, but I haven't actually looked." (Female, 35+ years)

"Everything is on eBay and it's searchable. If there isn't an answer I can just chat with an advisor and they'll even get a solicitor to ring you back if they're not sure themselves." (Male, 35+ years)

"When you're trying to upload your items there are a lot of prompts and things which are helpful - like what to include in your description and stuff like that." (Female, 18-34 years)

"I don't know if I get any support, it's probably on their [eBay] website, but I've never come across it or looked for it." (Male, 18-34 years)

In summary, while few sellers easily recall receiving product safety advice from online marketplaces, all feel confident they could find necessary information if they felt they needed it. However, the outcome of this search among participants is untested.

Reactions to an official description of product safety

Towards the end of the research discussions the moderator read out an official explanation of product safety supplied by OPSS. The purpose of this exercise was to check if sellers feel the description is clear and, after hearing it, feel it would impact on how they sell via online marketplaces.

Product safety legislation sets out that products can only be sold if they are safe. The General Product Safety Regulations 2005 (GPSR) require all products to be safe in their normal or reasonably foreseeable usage and enforcement authorities have powers to take appropriate action when this obligation isn't met. There are also specific regulations for some product sectors (for example toys), setting out essential safety requirements for those products. As a business, your responsibilities depend on your role. Manufactures are responsible for ensuring products comply with relevant legislation and drawing up appropriate technical documentation. Importers have a number of duties, including labelling the products with their details and checking and keeping technical documentation. Many retailers and those who sell online are distributors. Distributors are required to act with due care to ensure only safe products are supplied. Responsibilities include checking conformity markings and not supplying products if they consider the products may present a risk.

Nearly all participants say the description is clear and was easy to understand. Some suggested that the definition of "safety" was vague, and this could be an area that could be better explained.

There are two reactions from sellers to hearing the statement. The first is that it confirms how they currently behave so would not have any impact on their behaviour. The second group feel that while the statement is largely "common sense" it would encourage them to think more about product safety – it did not necessarily mean a significant change in how they sell through marketplaces, but that they would be more conscious of checking product safety and being as transparent as possible when describing what they are selling.

"Not necessarily [anything I would do differently]. With my business there's only so much I can do. But it makes me want to have a safety policy just on the off chance." (Female, 18-34 years)

"To me this says if the product is fine and working, it's ok to sell." (Male, 18-34 years)

"As clear as a legal description can be. As a general legal basis it seems very reasonable. There could be a grey area in the perception of safe." (Male, 18-34 years)

"One thing that stood out. They never define what they mean by safe. That could have been clearer. Other than that, it's quite clear." (Female, 18-34 years)

"I think combine that with some common sense. It would just make me more strict myself and make sure I know the exact use by dates of the products that I sell." (Male, 35+ years)

"It's pretty clear. I think this is referring to those who sell online as a business like they sell their products online, not second-hand products sellers." (Female, 35+ years)

Summary

The online marketplace sellers participating in this research generally sell a low volume of products and their attitudes, which are largely responsible, are shaped by the need to avoid bad reviews or returns.

From the recall of participants in this study, it appears that the marketplaces do little to educate or warn sellers, and once someone is familiar with the sites, it could make selling a wider variety and volume of products seem straightforward.

Because many sellers assume products are safe, few seem to think much about safety when they are selling goods. There is little evidence from the participants of proactive advice from the Online Marketplaces, with many participants assuming information would be available if they searched for it.

The more professional sellers provide lots of examples of being clear about where goods come from and making sure the original manufacturer is reputable, and being clear about ingredients or parts that may have a safety risk. This is driven both by safety concerns and, to a large extent, about making sure customers know what they are buying, so that they do not return a product or give a negative review.

There is a widespread belief that it is possible to sell low-quality or unsafe products on most online marketplaces if a seller was determined to do so. Several participants in this research say they came across lots of fake items for sale or from poor quality manufacturers, which they felt was both ethically wrong and also harmed genuine sellers. They would like marketplaces to be more active at removing rogue sellers.

"They do have a succinct few bullet points when loading items, e.g., to remind you about using an accurate image. They are good at reminders. And you do read them too as they are to the point and direct. They could add on something similar about "have you considered the safety" and provide a link. Even just increasing awareness would make a difference. Would make people stop and think." (Female, 18-34 years)

"A lot of the sellers online, they think because they are selling things that are cheap then there should be no rules. The platforms should set the rules." (Male, 18-34 years)

"On eBay I think there could be more attention to expiry dates from those people who are selling cheap things close to the expiry date. I think also the platform needs to take a little bit more responsibility. Maybe a box for sellers to say when the expiry date is and if it's within a certain time." (Male, 35+ years)

"I find a lot of the cheaper ones that are pretty much the same product they don't mention testing on their Etsy pages. They can get around that because they don't always market them as toys even though they clearly are toys for children. Unfortunately, it devalues my work because my work then seems really expensive because we're making sure it's safe as well." (Female, 18-34 years)

Some participants thought that sellers who were ‘professional’ in other ways (such as how goods were photographed, described, packaged and so on) were also likely to be more aware of consumer rights and product safety.

Finally, this research did not consider the views or experiences of people who buy goods through online marketplaces. It may be helpful to the overall project to understand these perspectives, given the importance of reviews and returns to how marketplaces operate, and to understand the salience of safety to buyers, and how they are supported by marketplaces to identify safe or unsafe goods.

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