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Evaluating criminal attitudes towards small retailers and corporations across geopolitical regions: A Western vs. Non-Western perspective

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This study investigates decision-making in the context of online fraud, considering the influence of geopolitical provenance and retailer size on consumer action. Through a mixed-methods approach, survey participants were presented with a hypothetical scenario involving the unintended receipt of an additional laptop from an online retailer. The study employed direct questioning and the item-count technique to evaluate participants' choices. Findings from the direct cohort revealed a significant association between geopolitical provenance and ethical decisions: non-Western participants were substantially more likely to return the laptop than their Western counterparts. These findings align with expectations that individuals from stricter societies, often characterised by harsher regulations and greater law enforcement, may exhibit higher levels of compliance. However, no such differences emerged in the indirect cohort. Retailer size did not significantly influence decisions in either cohort, suggesting that perceptions of corporate influence or scale were not central to respondents' behaviour. Crucially, the study highlights cultural norms as key drivers of moral decision-making while acknowledging the limitations of a small, student-focused sample and the challenges associated with Western versus non-Western classifications.

KEYWORDS
moral decision-making, *geopolitical provenance*, *retailer size*, online fraud, cultural norms, item-count technique, consumer behaviour

1 | INTRODUCTION

Understanding people's willingness to engage in immoral conduct lies at the heart of social science research. Surveys provide a practical tool for exploring these behaviours and identifying population trends. However, direct questioning often fails to elicit truthful responses, as respondents may tailor their answers to fit socially acceptable norms [1] [2]. This challenge, known as social desirability bias, can undermine the reliability of survey and polling results.

To address this, researchers have increasingly turned to indirect techniques like the item-count method [3]. In this approach, participants are randomly assigned to a treatment group that receives a list with a sensitive item or a control group that does not. Comparing the mean responses between the groups estimates the prevalence of the sensitive behaviour without direct questioning, preserving anonymity. While not without limitations, this method has been effective in studying illegal activities and controversial opinions, offering insights where direct questioning falls short [4].

1.1 | Study overview

Cross-cultural crime attitudes in retail remain underresearched. Previous work has explored variations in perceptions of crimes such as shoplifting or fraud. For example, Foster et al. analysed questionnaire responses from the UK, the US, and Libya and found significant differences in how these groups view the consequences of such actions [5]. While shoplifting was broadly viewed as unethical, non-Western respondents emphasised community impacts, whereas Western participants focused more on individual consequences. Other findings simply point that cultural norms shape societal views and definitions of crime, concluding that what is deemed criminal in one culture may be acceptable in another [6].

This study combines direct and indirect methodologies to address the literature gap and assess how likely individuals are to act questionably when ordering products from two types of retailers: a) **small independent businesses** and b) **large corporate retailers**. The questionnaire specifically considers ordering a laptop online and focuses on the choices following the unintended receipt of two laptops. This situation is analysed in relation to retailer size and cultural/geopolitical backgrounds, namely Western and non-Western regions. The questionnaire responses fall broadly into two categories: returning the extra laptop or choosing not to return it. Under the UK's **Theft Act 1968**, purposefully retaining the additional laptop would constitute a crime, as it deprives the rightful owner (the retailer) of their property, thereby meeting the legal criteria of dishonesty and intent to withhold the item permanently [7].

This legal framework provides a basis for interpreting the ethical and legal dimensions of the choices made by respondents.

1.2 | Aims and hypotheses

Given the above discussion, the primary objective is to examine online fraud as a function of geopolitical provenance and retailer size. The following hypotheses were initially proposed.

H1: Individuals are more inclined to commit fraud against corporate retailers than small independent businesses.

H2: Western and non-Western respondents differ in their likelihood of defrauding a given retailer.

The first hypothesis was informed by long-standing anti-corporate sentiment, amplified by recent developments since the pandemic [8] [9] [10]. The second drew on prior research into the differences in business ethics between Western and Eastern regions, as well as between Western and non-Western countries [11] [12] [13].

2 | MATERIALS AND METHODS

2.1 | Participant selection

Participants were selected through convenience sampling on or near UCL premises. Upon consent (see Appendix A), participants were randomly assigned one of six questionnaires, ensuring an even distribution across all versions. Their responses, along with their age, gender, and country of birth, were recorded. The final sample size consisted of 521 participants.

2.2 | Survey design

The survey comprised six questionnaires designed to evaluate participants' responses to the hypothetical laptop scenario. For questionnaires a-d, the item-count technique (indirect) was used, where participants indicated how many

options they would consider in the experimental (with a sensitive item) and control (without a sensitive item) conditions. Questionnaires e and f employed direct questioning and required participants to state explicitly with which options they agreed. The questionnaire was framed around two main sub-scenarios:

- **Corporate retailer:** Half of the participants considered a corporate retailer.
- **Small retailer:** The other half considered an independent retailer.

Participants were presented the following prompt:

"Suppose you have ordered a laptop online from a large corporate retailer or a small independent retailer. The package does not arrive when expected, so you complain, and the company agrees to send a replacement. The next day, the original order arrives in the mail. Which of the following would you consider acceptable?"

Control Group: Participants selected from four "non-sensitive" options:

1) Notify the company and return the replacement.
2) Request the company collect the replacement.
3) Keep the replacement and donate the original laptop to charity.
4) Keep both laptops and use the one that is believed to be lost to participate in a cyberattack.

Treatment Group: Included the above options plus an additional sensitive option (R5)[1]:

5) Keep the replacement and sell the original laptop on eBay.

Participants in the list conditions were shown all five op-

tions and asked to indicate explicitly which they considered acceptable, instead of just stating the number of acceptable options.

Table 1 summarises the characteristics of each questionnaire. For more details, please consult Appendix B.

2.3 | Data processing

The survey data was loaded into a Python DataFrame for pre-processing and cleaning, with tests conducted both in Python and StataMP. For the direct questioning method, rows with missing or conflicting responses (e.g., selecting both returning and not returning the laptop) were removed to allow binary outcomes for association tests. For the indirect method, rows missing the number of agreed items were excluded, too. Respondents were categorised as Western or non-Western based on provenance. Detailed preprocessing procedures are provided in Appendix C.

3 | RESULTS AND DISCUSSION

The direct and indirect cohorts are treated separately, as they tell different stories. Before discussing these analyses, a few descriptive observations are worth noting.

3.1 | Descriptive statistics

As outlined in the introduction, the primary independent variables are the **country of birth**, categorised into **Western** and **Non-Western** regions, and **retailer type**, also binary. The dependent variable reflects the participants' responses, measured as either yes/no choices or the number of selected answers. The dataset originally consisted of 521 entries, which were reduced to 109 entries for the direct cohort and 326 for the indirect cohort after prelimi-

TABLE 1 Overview of Experimental Conditions with Condition-Specific Characteristics

Questionnaire	Experimental Group	Cohort	Retailer	Extra Question
a	Treatment	Indirect	Corporate	Yes
b	Treatment	Indirect	Small	Yes
c	Control	Indirect	Corporate	No
d	Control	Indirect	Small	No
e	List	Direct	Corporate	Yes
f	List	Direct	Small	Yes

TABLE 2 Distribution of Western and Non-Western Entries by Group and Business Type

Corporate				Small Independent Business			
Group	**Western**	**Non-Western**	**Total**	**Group**	**Western**	**Non-Western**	**Total**
Treatment	41	47	86	Treatment	40	42	82
Control	44	35	79	Control	41	36	77
Direct	26	29	55	Direct	25	29	54

nary cleaning. A summary of the cleaned data is presented in Table 2.

By regional distribution, the dataset is significantly skewed, with China and the United Kingdom collectively accounting for 60% of all entries. Figure 1 highlights the top 10 countries by frequency of entries. Despite this imbalance, the distribution of Western and non-Western countries is nearly equal across all cohorts, as illustrated in Figure 2. Overall, the data is well-distributed and relatively homogeneous across all groups and cohorts.

3.2 | Direct cohort (Yes/No)

Before the analysis was conducted, the responses were categorised into two groups: those indicating a return decision and those indicating no return. A breakdown of this cate-
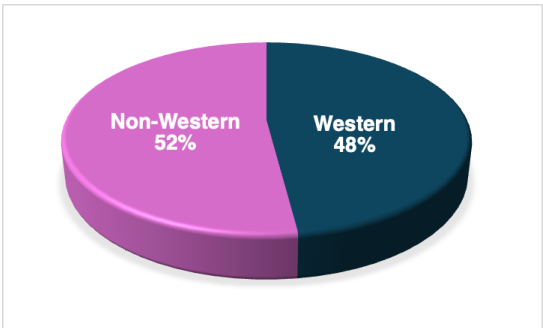
FIGURE 2 Proportional distribution of Western (48%) and Non-Western (52%) entries in the dataset. The division is influenced, to a lesser extent, by the classification of borderline cases, such as Poland, Hungary, Slovakia, and Romania, which together represent only 1.9% of the data.
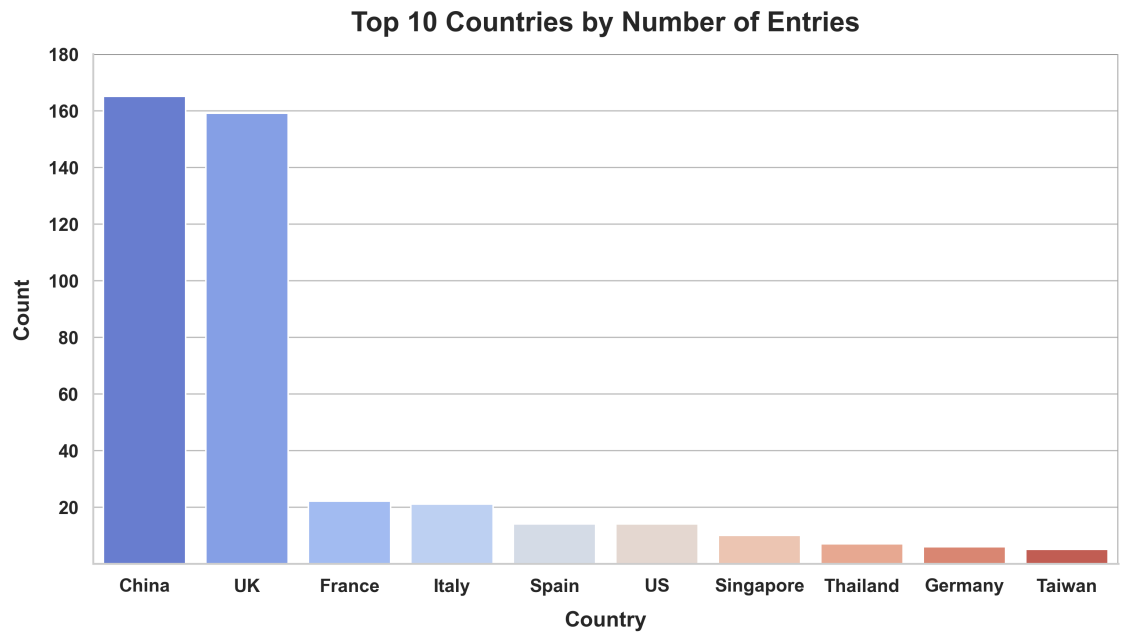
FIGURE 1 Distribution of the top 10 countries by the number of entries in the dataset. As it can be seen, China and the United Kingdom dominate the ranking in terms of frequency.

TABLE 3 Contingency Tables for Geopolitical Provenance and Retailer Size

Geopolitical Region	Return	No Return	Total	Retailer Size	Return	No Return	Total
Non-Western	52	6	58	Small Business	42	12	54
Expected	44.2	13.8	58	Expected	41.1	12.9	54
Western	31	20	51	Corporate	41	14	55
Expected	38.8	12.2	51	Expected	41.9	13.1	55
Total	83	26	109	Total	83	26	109

gorisation is shown in Figure 3. The analysis then explored the relationship between geopolitical provenance, retailer size, and respondents' decisions to return or not return a laptop. A contingency table was constructed to examine the association between geopolitical region (Western vs. Non-Western) and return decisions. The data revealed a statistically significant relationship between these variables, as confirmed by a Pearson chi-square test ($\chi^2(1) = 12.45$, $p < 0.001$) and a likelihood-ratio chi-square test ($\chi^2(1) = 12.87$, $p < 0.001$). The effect size, measured by Cramér's V, was $V = -0.338$, which indicates a moderate association.

Non-Western respondents were substantially more likely to return the laptop than expected, while Western respondents were less likely to do so. The observed frequencies for return and no-return decisions deviated significantly from the expected values, as shown in Table 3. These discrepancies reveal a notable effect of geopolitical background and ethical decision-making. These findings suggest that geopolitical provenance indeed influences ethical decision-making, thus validating **H2**.

A similar analysis was conducted to quantify the influence of retailer size (Small Independent vs. Corporate) on return decisions. In this case, no significant association was found. The Pearson chi-square test ($\chi^2(1) = 0.16$, $p = 0.692$) and likelihood-ratio chi-square test ($\chi^2(1) = 0.16$, $p = 0.692$) were non-significant, and the effect size ($V = -0.038$) indicated a negligible association.
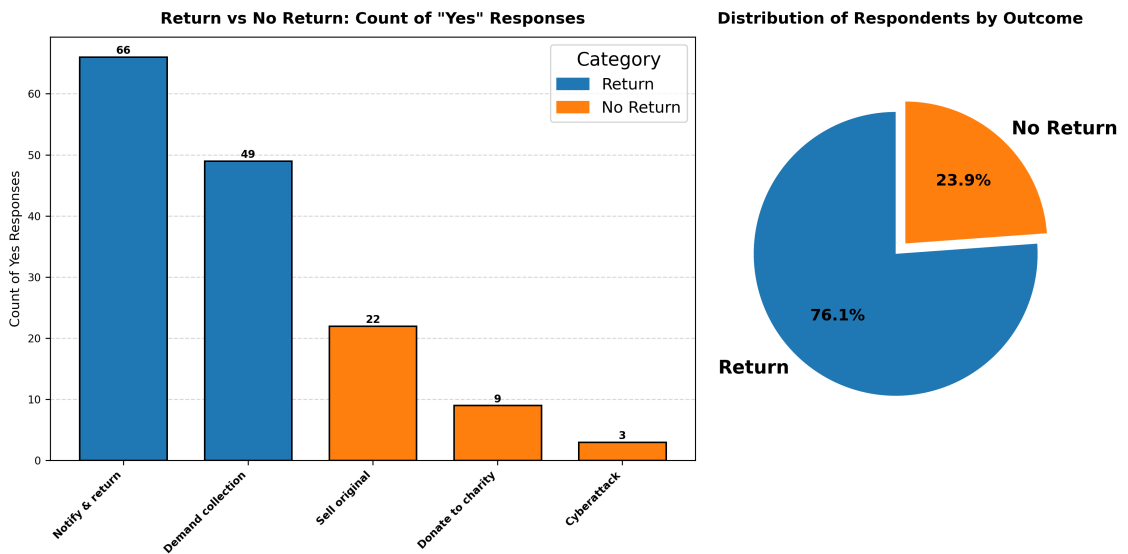

FIGURE 3 Return vs. No Return. On the left, a breakdown of response counts by action; on the right: the overall distribution of participants by outcome, with 76.1% opting for Return (blue) and 23.9% for No Return (orange). Note that the response counts on the left do not sum to the total cohort size (109), as respondents could select multiple options within the mutually exclusive categories of return or no return. However, the piechart shows the proportion of respondents who chose either return or no-return outcomes, which are mutually exclusive.

TABLE 4 Logistic Regression: Odds Ratios for Return Decisions

Variable	Odds Ratio	Std. Error	p-value
Business Type (Binary)	0.832	0.398	0.701
Geopolitical Provenance	0.179	0.093	0.001
Constant	9.532	4.785	0.000
Model Statistics			
Log-Likelihood	-53.37		
LR Chi-Square ($\chi^2(2)$)	13.02		0.0015
Pseudo-R^2	0.1087		

These results show that respondents' decisions were unaffected by retailer size, thereby rejecting **H1**. Instead, the observed patterns in return decisions were primarily driven by geopolitical provenance. This aligns with the dichotomy observed in the dataset, where the dominant entries—the UK and China—serve as proxies for Western and non-Western comparisons. Notably, Chinese society is often characterised by stricter regulations and harsher penalties, which may contribute to a heightened awareness of consequences and a more compliance-oriented behaviour among its citizens [14] [15].

To validate the above findings, a logistic regression analysis was conducted to examine the bivariate influence of geopolitical provenance and retailer size on the likelihood of returning the extra laptop. Odds ratios were used for interpretation. Consistent with the chi-square analyses, the odds of returning the laptop were significantly lower for Western participants compared to Non-Western participants (OR = 0.179, p = 0.001), showing that Western participants were approximately 82% less likely to return the laptop. Similarly, retailer size did not significantly impact the odds of returning the laptop (OR = 0.832, p = 0.701), reaffirming the earlier results. The baseline odds of returning the laptop were notably high (OR = 9.532, p < 0.001), revealing a general tendency among respondents to return the laptop. The model demonstrated a good fit (LR$\chi^2(2)$ = 13.02, p = 0.0015) and accounted for approximately 10.87% of the variance in return decisions (Pseudo-R^2 = 0.1087), as presented in Table 4.

3.3 | Indirect cohort

Several preliminary tests were conducted to assess the impact of the added response (R5) across different subgroups, followed by independent samples t-tests. Firstly, the **Shapiro-Wilk test** for normality (Table 5) indicated that two subgroups (Control-Non-Western and Treatment-Western) were approximately normally distributed, while the other two subgroups (Control-Western and Treatment-Non-Western) significantly deviated from normality. Despite these deviations, parametric tests were deemed suitable owing to the sufficiently large sample sizes (Table 1).

Next, **Levene's test** for equality of variances (Table 5) showed no significant differences in variance between the treatment and control groups across all subgroups, confirming that the assumption of equal variances was met. This allowed for the use of the pooled-variance t-test in subsequent analyses.

Finally, as Table 5 shows, the **independent samples t-tests** revealed no statistically significant differences in mean responses between the treatment and control groups in most subgroups. However, only the Non-Western-Small Business subgroup showed a statistically significant result in a one-tailed test (p = 0.029), indicating that the additional question in the treatment condition may have influenced agreement scores in this group. Additionally, the Western-Corporate subgroup approached significance in the one-tailed test, revealing a potential trend. Overall, these findings demonstrate that, on average, the extra response was not consistently distinguishable across the subgroups.

3.4 | Limitations

This study's small sample size limits statistical power and the ability to detect nuanced trends, reducing the reliability of observed patterns. Furthermore, the use of convenience sampling, primarily conducted around a university campus, resulted in a predominantly student population, which might introduce biases and limit the applicability of the findings to broader contexts.

Lastly, understanding these choices within the context of a rigid Western/Non-Western classification is inherently challenging. Geopolitical boundaries and cultural definitions are often fluid, subjective, and hotly contested. For instance, countries like Poland, Hungary, and Romania are geographically and politically situated in Europe. Still, debates persist about whether their cultural and historical trajectories align more with Western or non-Western paradigms. Similarly, globalisation has further blurred these distinctions, with cultural and economic influences transcending traditional boundaries [16].

TABLE 5 Summary of Shapiro-Wilk, Levene's Test, and T-test Results

Group	Shapiro-Wilk Test		Levene's Test		T-test Results	
	W	p-value	W	p-value	Treatment - Control	p-value
Western & Small Business	0.97	0.104	2.23	0.140	0.45	0.327
Western & Corporate	0.92	<0.001	0.35	0.560	1.63	0.053
Non-Western & Small Business	0.95	0.003	0.09	0.760	1.92	0.029
Non-Western & Corporate	0.98	0.169	1.15	0.290	-0.04	0.515

4 | CONCLUSION

This study examined ethical decision-making in online shopping, focusing on how geopolitical provenance and retailer size influence return practices. Results from the direct cohort indicated that non-Western participants were more likely to return the extra laptop than their Western counterparts, whereas the indirect cohort revealed no significant differences. Retailer size had minimal impact on ethical choices in either cohort, suggesting that perceptions of corporate scale do not strongly influence actions.

These findings highlight the role of cultural norms in shaping decisions, but the small, student-focused sample limits them. Future research should employ more diverse samples and refine indirect questioning methods to capture nuanced behaviours better.

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Appendix A: Participant Information Sheet

Moral Attitudes Survey – Department of Security & Crime Science

Participant Information Sheet

You are being invited to participate in a brief survey about moral attitudes conducted by students from University College London. Before you decide whether to participate, it is important for you to understand what participation will involve. Please read the following information and decide whether you wish to take part. **You can keep this form.**

What is the project's purpose? This is a small survey being carried out by students enrolled on a Master's course in the Department of Security & Crime Science in order to examine the public's attitudes towards moral dilemmas.

Why have I been chosen? You have been randomly selected to participate.

Do I have to take part? No – your participation is entirely voluntary and there will be no consequences for you if you do not wish to participate. You can withdraw at any time without any penalty.

What does taking part involve? You will be asked to complete a brief questionnaire about moral attitudes, which should take no more than 1-2 minutes to complete.

What are the possible benefits of taking part? While there are no immediate benefits to you, the data collected during this project will enable students to carry out coursework as part of their degree programme.

Will my participation be kept confidential? No information will be collected that will allow you to be identified – please do not write your name or any other identifying information on the questionnaire. In any subsequent publication, data will be presented in a completely anonymous form.

Where can I receive further information? We are happy to answer any questions you may have. If you subsequently have any further questions, these can be addressed to the module leader, Dr Toby Davies, via scs@ucl.ac.uk.

To whom can I complain? If you have any complaints, please contact the module leader, Dr Toby Davies, via scs@ucl.ac.uk in the first instance. If, after this, you feel that your complaint has not been handled to your satisfaction, you can contact the Chair of the UCL Research Ethics Committee via ethics@ucl.ac.uk.

Thank you for reading this information sheet – **you can keep this form.**

Appendix B: Survey Questionnaire

The complete questionnaires used in the study are presented in this section. Note that, in the indirect cohort, responses highlighted in yellow represent the extra question tested, which was included in the treatment groups but omitted from the control groups. Also note that only Question 2 from each questionnaire was considered for analysis in this study.

.1 | Indirect Cohort (Item Count)

| Questionnaire a: Treatment Group - Corporate retailer

1. **Are you:**
   - □ Male
   - □ Female
2. **Please state your age:** _____
3. **In which country were you born?** _____
4. **Scenario 1: Lost Mobile Phone**

   Suppose you found a mobile phone on the ground, presumably lost but still in apparently working condition. Which of the following do you think you would consider doing? **Please just tell me how many you would consider doing; not which ones specifically.**

   Options:
   - (a) Leave the phone where it is.
   - (b) Use any instructions on the lock screen to contact the owner and return the phone.
   - (c) Give the phone to the police.
   - (d) Sell the phone for a profit.
   - (e) Use the lock screen instructions to contact the owner, then rob them when they arrive to collect the phone.
5. **Scenario 2: Online Laptop Order**

   Suppose you have ordered a laptop online from a large corporate retailer. The package does not arrive when expected, so you complain, and the company agrees to send a replacement. The next day, the original order arrives in the mail. Which of the following would you consider acceptable? Again, please just tell me how many you would consider doing.

   Options:
   - (a) Notify the company and return the replacement by mail.
   - (b) Keep the replacement when it arrives, and sell the original on eBay.
   - (c) Demand that the company collects the replacement from you.
   - (d) Keep the replacement when it arrives, and donate the original laptop to charity.
   - (e) Keep both laptops and use the one that is believed to be lost to participate in a cyberattack.

| Questionnaire b: Treatment Group - Small Independent Retailer

1. **Are you:**
   - ☐ Male
   - ☐ Female

2. **Please state your age:** _____

3. **In which country were you born?** _____

4. **Question 1: Lost Mobile Phone**

   Suppose you found a mobile phone on the ground, presumably lost but still in apparently working condition. Which of the following do you think you would consider doing? **Please just tell me how many you would consider doing; not which ones specifically.**

   Options:

   (a) Leave the phone where it is.

   (b) Use any instructions on the lock screen to contact the owner and return the phone.

   (c) Give the phone to the police.

   (d) Sell the phone for a profit.

   (e) Use the lock screen instructions to contact the owner, then rob them when they arrive to collect the phone.

5. **Question 2: Online Laptop Order**

   Suppose you have ordered a laptop online from a small independent retailer. The package does not arrive when expected, so you complain, and the company agrees to send a replacement. The next day, the original order arrives in the mail. Which of the following would you consider acceptable? Again, please just tell me how many you would consider doing.

   Options:

   (a) Notify the company and return the replacement by mail.

   (b) Keep the replacement when it arrives, and sell the original on eBay.

   (c) Demand that the company collects the replacement from you.

   (d) Keep the replacement when it arrives, and donate the original laptop to charity.

   (e) Keep both laptops and use the one that is believed to be lost to participate in a cyberattack.

| Questionnaire c: Control Group - Corporate Retailer

1. **Are you:**
   - ☐ Male
   - ☐ Female
2. **Please state your age:** _____
3. **In which country were you born?** _____
4. **Question 1: Lost Mobile Phone**

   Suppose you found a mobile phone on the ground, presumably lost but still in apparently working condition. Which of the following do you think you would consider doing? **Please just tell me how many you would consider doing; not which ones specifically.**

   Options:
   (a) Leave the phone where it is.
   (b) Use any instructions on the lock screen to contact the owner and return the phone.
   (c) Give the phone to the police.
   (d) Use the lock screen instructions to contact the owner, then rob them when they arrive to collect the phone.
5. **Question 2: Online Laptop Order**

   Suppose you have ordered a laptop online from a large corporate retailer. The package does not arrive when expected, so you complain, and the company agrees to send a replacement. The next day, the original order arrives in the mail. Which of the following would you consider acceptable? Again, please just tell me how many you would consider doing.

   Options:
   (a) Notify the company and return the replacement by mail.
   (b) Demand that the company collects the replacement from you.
   (c) Keep the replacement when it arrives, and donate the original laptop to charity.
   (d) Keep both laptops and use the one that is believed to be lost to participate in a cyberattack.

| Questionnaire d: Control Group - Small Independent Retailer

1. **Are you:**
   - □ Male
   - □ Female

2. **Please state your age:** _____

3. **In which country were you born?** _____

4. **Question 1: Lost Mobile Phone**

   Suppose you found a mobile phone on the ground, presumably lost but still in apparently working condition. Which of the following do you think you would consider doing? **Please just tell me how many you would consider doing; not which ones specifically.**

   Options:

   (a) Leave the phone where it is.

   (b) Use any instructions on the lock screen to contact the owner and return the phone.

   (c) Give the phone to the police.

   (d) Use the lock screen instructions to contact the owner, then rob them when they arrive to collect the phone.

5. **Question 2: Online Laptop Order**

   Suppose you have ordered a laptop online from a small independent retailer. The package does not arrive when expected, so you complain, and the company agrees to send a replacement. The next day, the original order arrives in the mail. Which of the following would you consider acceptable? **Please just tell me how many you would consider doing; not which ones specifically.**

   Options:

   (a) Notify the company and return the replacement by mail.

   (b) Demand that the company collects the replacement from you.

   (c) Keep the replacement when it arrives, and donate the original laptop to charity.

   (d) Keep both laptops and use the one that is believed to be lost to participate in a cyberattack.

.2 | Direct Cohort (Explicit Yes/No Responses)

| Questionnaire e: Corporate Retailer

1. **Are you:**
   - □ Male
   - □ Female
2. **Please state your age:** _____
3. **In which country were you born?** _____
4. **Question 1: Lost Mobile Phone**

   Suppose you found a mobile phone on the ground, presumably lost but still in apparently working condition. Which of the following do you think you would consider doing? **Please say whether or not in each case.**

   Options:
   - □ Leave the phone where it is.
   - □ Use any instructions on the lock screen to contact the owner and return the phone.
   - □ Give the phone to the police.
   - □ Use the lock screen instructions to contact the owner, then rob them when they arrive to collect the phone.
   - □ Sell the phone for a profit.
5. **Question 2: Online Laptop Order**

   Suppose you have ordered a laptop online from a corporate retailer. The package does not arrive when expected, so you complain, and the company agrees to send a replacement. The next day, the original order arrives in the mail. Which of the following would you consider acceptable? **Please say whether or not in each case.**

   Options:
   - □ Notify the company and return the replacement by mail.
   - □ Keep the replacement when it arrives, and sell the original on eBay.
   - □ Demand that the company collects the replacement from you.
   - □ Keep the replacement when it arrives, and donate the original laptop to charity.
   - □ Keep both laptops and use the one that is believed to be lost to participate in a cyberattack.

| Questionnaire f: Small Independent Retailer

1. **Are you:**
   - ☐ Male
   - ☐ Female
2. **Please state your age:** _____
3. **In which country were you born?** _____
4. **Question 1: Lost Mobile Phone**

   Suppose you found a mobile phone on the ground, presumably lost but still in apparently working condition. Which of the following do you think you would consider doing? **Please say whether or not in each case.**

   Options:
   - ☐ Leave the phone where it is.
   - ☐ Use any instructions on the lock screen to contact the owner and return the phone.
   - ☐ Give the phone to the police.
   - ☐ Use the lock screen instructions to contact the owner, then rob them when they arrive to collect the phone.
   - ☐ Sell the phone for a profit.
5. **Question 2: Online Laptop Order**

   Suppose you have ordered a laptop online from a small independent retailer. The package does not arrive when expected, so you complain, and the company agrees to send a replacement. The next day, the original order arrives in the mail. Which of the following would you consider acceptable? **Please say whether or not in each case.**

   Options:
   - ☐ Notify the company and return the replacement by mail.
   - ☐ Keep the replacement when it arrives, and sell the original on eBay.
   - ☐ Demand that the company collects the replacement from you.
   - ☐ Keep the replacement when it arrives, and donate the original laptop to charity.
   - ☐ Keep both laptops and use the one that is believed to be lost to participate in a cyberattack.

Appendix C: Data Preprocessing Details

Entries with null values for the key variables of interest, i.e. return decisions and geopolitical provenance (country of birth), were removed. As the study focused on participants' return decisions and their geopolitical classification as either Western or Non-Western, missing data for these variables made such entries unsuitable for analysis and thus they were excluded.

For the direct cohort, participants' responses were categorised into **return** or **no return** outcomes based on their selected actions. Specifically, responses indicating a willingness to notify the company and return the replacement by mail (*option a*) or demand that the company collects the replacement (*option c*) were classified as "return" outcomes, reflecting ethical practices of returning the additional item to its rightful owner. Conversely, responses where participants chose to keep the replacement and sell the original on eBay (*option b*), donate the original (*option d*), or use one laptop in a cyberattack (*option e*) were classified as "no return" outcomes, as they involved retaining the additional item for personal use or other purposes. Entries where participants selected both "return" and "no return" options (e.g., choosing both *option a* and *option b*) were considered **contradictory** and were excluded from analysis to ensure clear binary classification. For the indirect cohort, rows with null or zero values for the number of agreed items were excluded, as these also represented logical inconsistencies. For example, a response indicating "zero agreed options" conflicted with the instructions to select acceptable actions, rendering the data unreliable.

Respondents were classified into "Western" or "Non-Western" groups based on their country of birth[2]. The classifications were as follows:

Western countries: United Kingdom, France, Italy, Ireland, Germany, United States, Canada, Spain, Portugal, New Zealand, Australia, Greece, Netherlands, Belgium, *Slovakia*, Finland, Lithuania, Estonia, and Norway.

Non-Western countries: India, South Africa, Pakistan, *Poland*, Korea, China, Taiwan, Tunisia, South Korea, Singapore, Saudi Arabia, Somalia, *Romania*, Iran, Indonesia, Bangladesh, Egypt, Myanmar, Japan, Bosnia and Herzegovina, Thailand, Malaysia, Philippines, Ghana, Russia, Nigeria, Brazil, Vietnam, Iraq, Colombia, Croatia, Albania, Chile, Jamaica, and *Hungary*.

Notes

[1] The term "sensitive question" refers to the additional question in the treatment group for testing and is not inherently more sensitive than the rest. Compare *selling the additional laptop on eBay* with *using it for online hacking or identity theft*.

[2] The countries highlighted in italics are often regarded as borderline cases within the East versus West dichotomy.

Notes on statistics

| T-Test Analysis

The indirect cohort showed no significant results overall because only one subgroup, the Non-Western-Small Business group, demonstrated a statistically significant difference in responses ($p = 0.029$). This lack of consistent significance across other subgroups made it impossible to draw reliable comparisons between Western and non-Western attitudes. Without a broader pattern of statistical significance, the findings do not support meaningful conclusions about differences in attitudes between these groups in the indirect cohort.

| Pseudo R-squared

The logistic regression model (direct cohort) produced a pseudo R-squared value of 10.87%. While this may seem low, it is reasonable within the social sciences, where complex human behaviour is influenced by many hidden variables. Importantly, pseudo R-squared measures the improvement of the fitted model compared to a null (baseline) model rather than explaining variance in the outcome. Thus, the value obtained reflects a significant improvement over the null model.

| The importance of randomisation

Randomisation was essential in order to ensure unbiased distribution of participants across treatment and control groups. By randomly assigning individuals to scenarios involving either a corporate or small independent retailer, the study minimised systematic differences and strengthened the internal validity of its findings.

For the comparison of Western and non-Western attitudes, randomisation also balanced demographic and cultural characteristics across subgroups. This helped to reduce the probability of concentrating specific demographics in one group or another.