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A.1 Study 1 and 2: instrument and experimental design

A.1.1 Subject screens

Figure A.1: Screen shot of one realization of the factorial vignette as shown to respondents in study 1 (UK sample, 2020)

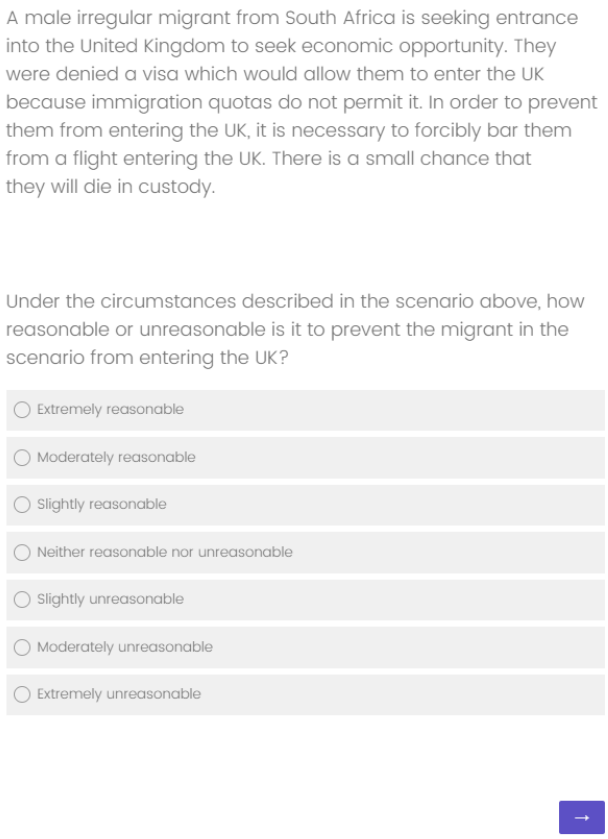
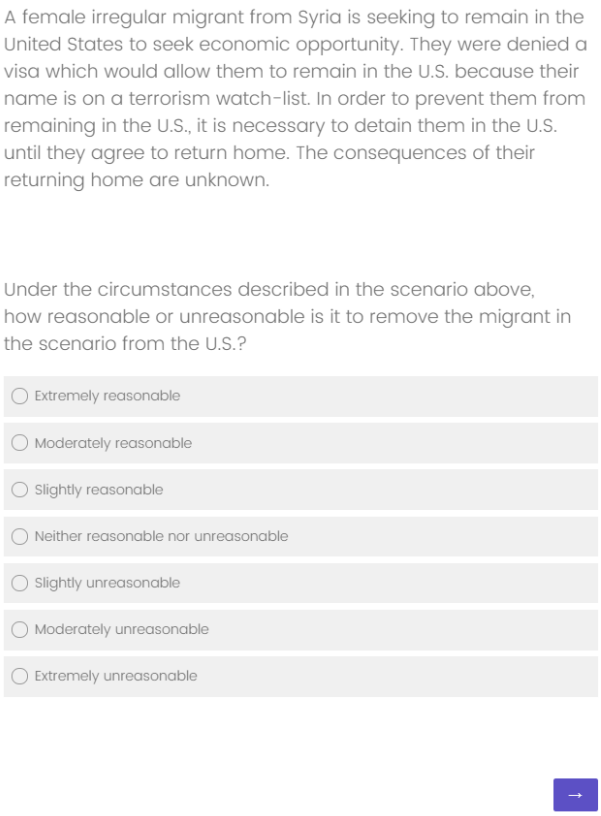


Figure A.2: Screen shot of one realization of the factorial vignette as shown to respondents in study 2 (US sample, 2020)



A.1.2 Vignette text

A ['female'/ 'male'] (Gender of migrant) irregular migrant from [See list of countries by study in Table A.1] ['seeking to enter'/'seeking to remain'] (Prospective or Retrospective) in the UK/US to ['seek economic opportunity'/ 'to avoid extreme poverty'/ 'to avoid ethnic persecution'/ 'for medical treatment'] (Reason for migrating). They were denied a visa which would allow them to ['enter'/ 'remain'] in the U.S./U.K. because ['they are unable to secure employment'/ 'they have a history of criminal activity'/ 'their name is on a terror watch list'/ 'immigration quotas do not permit it'/ 'they tested positively for Covid-19'] (Reasons for denial of visa). In order to prevent them from ['entering'/ 'remaining in'] the U.S./U.K., it is necessary to ['forcibly bar them from a flight entering to the U.S./U.K.'/ 'forcibly place them on the earliest flight leaving the U.S./U.K.'/ 'detain them at the border until they agree to return home'/ 'detain them in the U.S./U.K. until they agree to return home'] (Method of migrant removal). ['There is a small chance that they'/ 'There is a high chance that they'/ 'It is near certain that they'/ 'They'] ['will suffer bodily harm being taken into custody'/ 'will die in custody'/ 'will suffer bodily harm as a result of ethnic persecution if they return home'/ 'will be killed as a result of ethnic persecution if they return home'/ 'will suffer severe malnutrition if they return home'/ 'will die of starvation if they return home'/ 'will suffer severe disability from untreated illness if they return home'/ 'will die from their illness if they return home'/ 'will return home without complications'/ 'The consequences of their returning home are unknown'](Certainty information and Consequences of migrant removal).

Table A.1: List of attribute values for the region and country attribute in study 1 (UK sample) and 2 (US sample). We randomly drew a region at the respondent-level and then a country from that region at the vignette-level.

	Study 1 (UK)	Study 2 (US)
Africa	Nigeria, Ethiopia, South Africa, Kenya	Nigeria, Ethiopia, South Africa, Kenya
Eastern Europe	Poland, Romania, Russia, Ukraine	Poland, Romania, Russia, Ukraine
Middle East	Iran, Syria, UAE, Israel	Iran, Syria, UAE, Israel
Southeast Asia	India, Bangladesh, Pakistan, Myanmar	China, Bangladesh, Pakistan, Myanmar

A.1.3 Outcome measure

1. *Under the circumstances described in the scenario above, how reasonable or unreasonable is it to prevent the migrant in the scenario from entering the U.S./U.K.?* [Extremely reasonable (1) - Extremely unreasonable (7)]

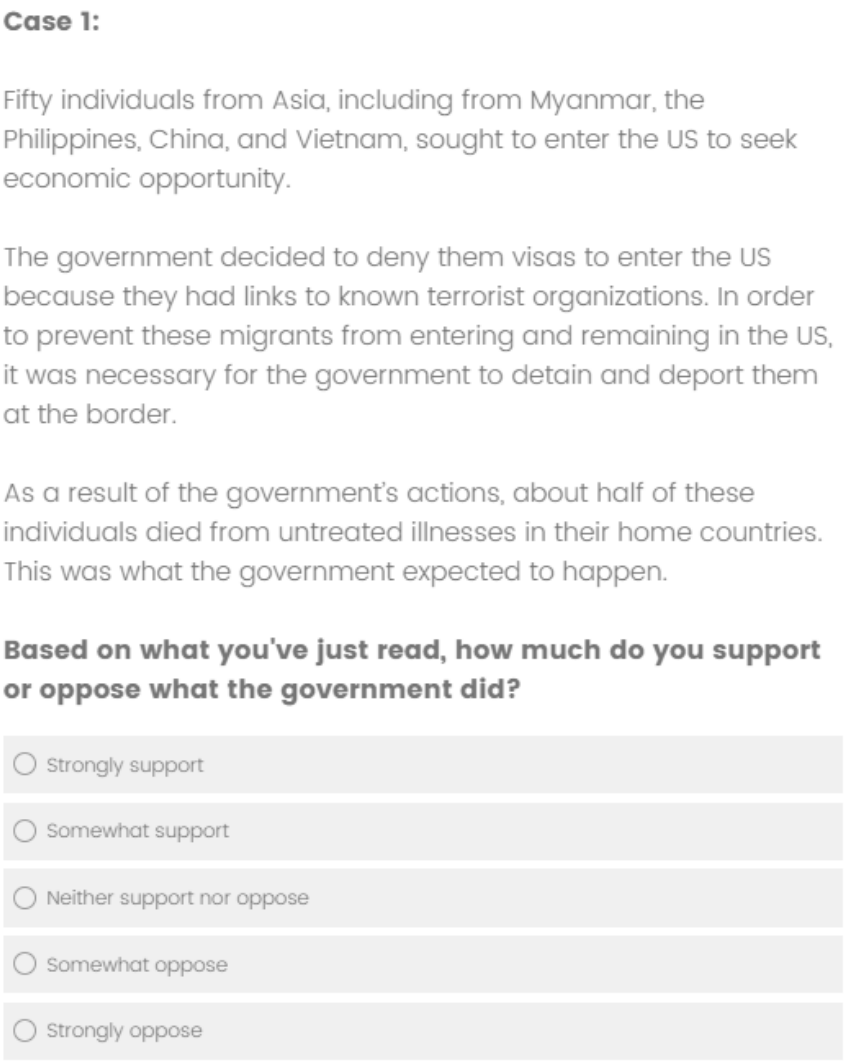
For ease of display, we reversed the scale in our presentation of results in the main text.

We further elicit respondents' gender, education, income, humanitarian orientation, reading the Mind in the Eyes task, political ideology, votes in previous elections, attitudes towards immigration restrictions in general, and the preferred methods of immigration control (deportation, detaining, denial access of healthcare, blanket amnesty, limited amnesty, no immigration control).

A.2 Study 3: instrument and experimental design

A.2.1 Screen shots

Figure A.3: Screen shot of one realization of the factorial vignette as shown to respondents in study 3 (US sample, 2021)



A.2.2 Vignette text

['Ten'/'Fifty'/'About 100'/'About 500'/'About 1,000'/'About 2,500'] (Number of migrants) individuals from ['Europe, including from Belarus, Kosovo, Russia, and Ukraine'/'Asia including from Myanmar, the Philippines, China, and Vietnam'/'the Middle East, including from Iran, Syria, Saudi Arabia, and the United Arab Emirates'/'Sub-Saharan Africa, including from Ethiopia, Kenya, Senegal, and Nigeria'/'Latin America, including from Brazil, Venezuela, Mexico, and Nicaragua'] (Region and country), sought to enter the US ['to escape ethnic persecution in their home countries'/'to escape extreme poverty in their home countries'/'to access medical treatment'/'to seek economic opportunity'] (Reason for migrating). The government decided to deny them visas to enter the US because ['they were unable to secure employment'/'they had a history of criminal activity'/'they had links to known terrorist organizations'/'immigration quotas did not permit'/'they tested positively for Covid-19'] (Reason for visa denial). In order to prevent these migrants from entering and remaining in the US, it was necessary for the government to ['detain and deport them at the border'/'instruct airlines in their countries of origin to prevent them from boarding flights'] (Method of migrant removal). As a result of the government's actions, ['a few isolated '/'less than a quarter of these '/'about half of these '/'more than three quarters of these'] (Number of affected migrants) ['individuals suffered physical injuries while detained by the government'/'individuals died while being detained by the government'/ 'individuals suffered physical injuries while detained by airport security in their home countries'/ 'individuals died while being detained by airport security in their home countries'/'individuals suffered physical injuries as a result of ethnic persecution in their home countries'/'individuals were killed as a result of ethnic persecution in their home countries'/'individuals suffered severe malnutrition in their home countries'/ 'individuals died from starvation in their home countries'/'individuals suffered from the effects of untreated illness in their home countries'/'individuals died from untreated illnesses in their home countries'/ 'individuals were assaulted by smugglers they paid to help them re-attempt entry to the US'/'individuals were killed by smugglers they paid to help them re-attempt entry to the US'/'individuals re-attempted to enter the US and were injured during their journeys'/'individuals re-attempted to enter the US and died during their journeys'/'the individuals returned home unharmed'] (Consequence of migrant removal). This was what the government expected to happen.

A.2.3 Outcome measure

1. Support for action by government: *Based on what you've just read, how much do you support or oppose what the government* did?" [Strongly support (1) - Strongly oppose (5)]

2. Reasonable enforcement: *How much do you agree or disagree with the following statements about the case you've just read? It is reasonable to prevent these migrants from entering the U.S.* [Strongly agree (1) - Strongly disagree (7)]

3. Justified harm: *How much do you agree or disagree with the following statements about the case you've just read? The harm arising from the government's actions are justified.* [Strongly agree (1) - Strongly disagree (7)]

Respondents' answers were self-reported and forced.

A.3 Restriction to randomization of attributes and identification strategy

Making a distinction between active and passive harm but still maintaining coherence of the vignette, we limited the full randomization of attributes in several ways. First, the form of passive harm suffered by a migrant due to returning to their home country was linked to the reason for their initial migration attempt. For example, a migrant who left their country due to persecution may be injured or killed due to persecution if returned to their country. However, they could not suffer greater or lesser harm from other causes, such as illness and malnutrition/starvation, which are linked to the migration motivations of medical care and escaping extreme poverty respectively. Secondly, while each form of passive harm suggests itself naturally from the harm a migrant was originally attempting to escape by leaving the country, no such harm suggests itself for migrants leaving for economic opportunity. One solution might be to fully randomize all possible forms of passive harm for vignettes with economic migrants, but to avoid a jarring tasks for respondents, who had been given no prior reason to believe such a passive form of harm possible in this particular scenario. For example, imagine a person migrates for reasons of economic opportunity and upon being denied entry to the UK returns to their country and is killed due to persecution. Is a respondent to believe that the migrant's true motive was actually economic opportunity or were they secretly fleeing persecution and the respondent simply was not told this information?

Preserving the capacity of building inference on randomization within the experiment, to deal with the first set of restrictions, we treat reason to migrate and consequence of return as one attribute and do not estimate separate effects on the outcome measure as they would be biased.[1] With respect to the second set of restrictions, we assigned a very small (0.2%) chance to vignettes with economic migrants suffering either malnutrition or starvation upon returning to the country, with the remaining probability allocated evenly between injury and death due to active harm, and no harm (roughly 33% each)[2] as it is recommended practice in factorial vignette experiments (Hainmueller, Hopkins, and Yamamoto 2014).

[1] See Egami and Imai (2018, 531) suggesting to obtain the corresponding subset of estimates to deal with constraint randomization in factorial experiments.

[2] This is in contrast to other branches of the conjoint by which each possible outcome was weighted evenly at 20%: injury due to active harm, death due to active harm, injury due to passive harm, death due to passive harm, and no harm.

B Statistical appendix

B.1 Regression analysis

Table B.2: Linear least squares regression of our outcome measure, the response to the question whether excluding a migrant is reasonable, on indicators variables of all attribute levels and a variable capturing the vignette number (recall every respondent sees 5 immigration cases in study 1 and 2) with standard errors clustered at the respondent-level).

	United States	United Kingdom
No harm		
Unknown harm	−0.205 (0.085)*	−0.505 (0.078)***
Active harm	−0.683 (0.067)***	−1.292 (0.064)***
Passive harm	−0.742 (0.077)***	−1.585 (0.073)***
Economic Opportunity		
Ethnic Persecution	−0.251 (0.062)***	−0.815 (0.060)***
Extreme Poverty	−0.174 (0.058)**	−0.341 (0.058)***
Medical Treatment	−0.409 (0.061)***	−0.351 (0.059)***
Unemployed		
Immigration Quotas	−0.073 (0.068)	−0.170 (0.067)*
COVID-19 Positive	0.462 (0.072)***	0.417 (0.074)***
Criminal History	0.762 (0.069)***	1.032 (0.068)***
Terror Watchlist	0.920 (0.070)***	1.943 (0.067)***
Bar/Force Travel		
Detention	−0.007 (0.043)	0.090 (0.042)*
Proactive		
Retroactive	−0.225 (0.042)***	−0.443 (0.042)***
Africa		
Asia	−0.051 (0.064)	0.040 (0.055)
Central/South America	0.029 (0.065)	
Eastern Europe	0.050 (0.068)	0.040 (0.055)
Middle East	0.047 (0.067)	0.086 (0.055)
Female		
Male	0.028 (0.042)	0.132 (0.040)***
Vignette 1		
Vignette 2	−0.164 (0.045)***	−0.129 (0.048)**
Vignette 3	−0.168 (0.048)***	−0.117 (0.049)*
Vignette 4	−0.211 (0.049)***	−0.102 (0.049)*
Vignette 5	−0.087 (0.050)	−0.011 (0.049)
Constant	5.182 (0.100)***	5.264 (0.095)***
R^2	0.070	0.243
Adj. R^2	0.067	0.241
Num. obs.	9019	8627
RMSE	1.977	1.859
N Clusters	1839	1728

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table B.3: Linear least squares regression of our outcome measure on indicators variables of all attribute levels and vignette number run separately for the UK and US samples (Study 1 and 2) and the attribute levels of reason for migration; standard errors clustered at the respondent-level. The table omits the coefficients on the intercept, all attributes except the consequences of enforcement, and vignette number for ease of display. Recall that there is no permutation in which economic migrants were subject to passive harm, as discussed in the experimental design section above. The regression presented here speaks to the analysis discussed with Figure 1.

	United States	United Kingdom
Economic opportunity		
No harm		
Unknown harm	−0.200 (0.112)	−0.513 (0.105)***
Active harm	−0.761 (0.100)***	−1.558 (0.097)***
R^2	0.045	0.165
Adj. R^2	0.032	0.155
Num. obs.	1385	1347
RMSE	1.819	1.676
N Clusters	884	856
Ethnic Persecution		
No harm		
Unknown harm	−0.069 (0.152)	−0.456 (0.149)**
Active harm	−0.413 (0.144)**	−0.853 (0.141)***
Passive harm	−0.559 (0.143)***	−1.393 (0.142)***
R^2	0.063	0.215
Adj. R^2	0.055	0.209
Num. obs.	2175	2192
RMSE	2.032	1.915
N Clusters	1343	1328
Extreme Poverty		
No harm		
Unknown harm	−0.116 (0.141)	−0.447 (0.139)**
Active harm	−0.694 (0.141)***	−1.243 (0.139)***
Passive harm	−0.781 (0.139)***	−1.598 (0.137)***
R^2	0.071	0.224
Adj. R^2	0.063	0.218
Num. obs.	2214	2095
RMSE	1.963	1.867
N Clusters	1373	1317
Medical Treatment		
No harm		
Unknown harm	−0.409 (0.150)**	−0.491 (0.133)***
Active harm	−0.816 (0.144)***	−1.286 (0.130)***
Passive harm	−0.841 (0.146)***	−1.527 (0.133)***
R^2	0.073	0.230
Adj. R^2	0.065	0.223
Num. obs.	2244	2117
RMSE	2.046	1.874
N Clusters	1379	1325

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table B.4: Linear least squares regression of our outcome measure on indicators variables of all attribute levels and vignette number run separately for the UK and US samples (Study 1 and 2) and the attribute levels of the strength of harm from enforcement; standard errors clustered at the respondent-level. The table omits the coefficients on the intercept, all attributes except the severity of the consequences of enforcement, and vignette number for ease of display. The regression presented here speaks to the analysis discussed with Figure 2.

	United States	United Kingdom
Unemployed		
No harm		
Consequence Unknown	−0.404 (0.156)*	−0.720 (0.156)***
Harm	−0.932 (0.149)***	−1.332 (0.145)***
Death	−1.035 (0.157)***	−2.010 (0.145)***
R^2	0.051	0.162
Adj. R^2	0.042	0.154
Num. obs.	1768	1740
RMSE	2.024	1.892
N Clusters	1202	1170
Immigration Quotas		
No harm		
Consequence Unknown	−0.229 (0.163)	−0.754 (0.153)***
Harm	−0.591 (0.154)***	−1.405 (0.149)***
Death	−0.833 (0.164)***	−1.849 (0.148)***
R^2	0.045	0.150
Adj. R^2	0.036	0.142
Num. obs.	1823	1709
RMSE	2.070	1.858
N Clusters	1231	1149
COVID-19 Positive		
No harm		
Consequence Unknown	−0.247 (0.152)	−0.509 (0.160)**
Harm	−0.587 (0.156)***	−1.129 (0.161)***
Death	−0.680 (0.146)***	−1.765 (0.160)***
R^2	0.052	0.192
Adj. R^2	0.043	0.184
Num. obs.	1769	1695
RMSE	2.023	2.018
N Clusters	1217	1130
Criminal History		
No harm		
Consequence Unknown	−0.111 (0.147)	−0.209 (0.141)
Harm	−0.454 (0.138)**	−0.956 (0.138)***
Death	−0.637 (0.148)***	−1.475 (0.150)***
R^2	0.029	0.136
Adj. R^2	0.020	0.128
Num. obs.	1806	1742
RMSE	1.908	1.798
N Clusters	1218	1148
Terror Watchlist		
No harm		
Consequence Unknown	−0.060 (0.139)	−0.260 (0.104)*
Harm	−0.623 (0.139)***	−0.780 (0.106)***
Death	−0.723 (0.145)***	−1.263 (0.120)***
R^2	0.044	0.103
Adj. R^2	0.035	0.094
Num. obs.	1853	1741
RMSE	1.833	1.602
N Clusters	1239	1167

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table B.5: Linear least squares regression of our outcome measure on indicators variables of all attribute levels and vignette number run separately for the UK and US samples (Study 1 and 2); standard errors clustered at the respondent-level. We show the coefficient on the indicator for the strength of harm from enforcement (No harm, unknown consequences, harm, or death). The table omits the coefficients on the intercept, the remaining attributes, and vignette number for ease of display. The regression presented here speaks to the analysis discussed with Figure 3.

	United States	United Kingdom
No Harm		
Consequence Unknown	−0.204 (0.085)*	−0.496 (0.078)***
Harm	−0.629 (0.068)***	−1.129 (0.064)***
Death	−0.780 (0.072)***	−1.667 (0.068)***
R^2	0.070	0.249
Adj. R^2	0.068	0.247
Num. obs.	9019	8627
RMSE	1.976	1.851
N Clusters	1839	1728

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table B.6: Linear least squares regression of our outcome measure on indicators variables of all attribute levels and vignette number run separately for the UK and US samples (Study 1 and 2); standard errors clustered at the respondent-level. We show the coefficient on the indicator for the consequence from enforcement (No harm, unknown harm, active harm, passive harm). The table omits the coefficients on the intercept, the remaining attributes, and vignette number for ease of display. The regression presented here speaks to the analysis discussed with Figure 6.

	United States	United Kingdom
No Harm		
Unknown harm	−0.205 (0.085)*	−0.505 (0.078)***
Active harm	−0.683 (0.067)***	−1.292 (0.064)***
Passive harm	−0.742 (0.077)***	−1.585 (0.073)***
R^2	0.070	0.243
Adj. R^2	0.067	0.241
Num. obs.	9019	8627
RMSE	1.977	1.859
N Clusters	1839	1728

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table B.7: Linear least squares regression of our outcome measure on indicators variables of all attribute levels and vignette number run separately for the UK and US samples (Study 1 and 2) and the attribute levels of reason for visa denial; standard errors clustered at the respondent-level. The table omits the coefficients on the intercept, all attributes except for the consequence from enforcement (No harm, unknown harm, active harm, passive harm), and vignette number for ease of display. Recall that there is no permutation in which economic migrants were subject to passive harm, as discussed in the experimental design section above. The regression presented here speaks to the analysis discussed with Figure 5.

	United States	United Kingdom
Unemployed		
No harm		
Unknown harm	−0.402 (0.157)*	−0.724 (0.156)***
Active harm	−1.023 (0.147)***	−1.619 (0.138)***
Passive harm	−0.902 (0.167)***	−1.763 (0.159)***
R^2	0.051	0.149
Adj. R^2	0.042	0.141
Num. obs.	1768	1740
RMSE	2.024	1.907
N Clusters	1202	1170
Immigration Quotas		
No harm		
Unknown harm	−0.233 (0.163)	−0.758 (0.153)***
Active harm	−0.630 (0.151)***	−1.599 (0.142)***
Passive harm	−0.860 (0.175)***	−1.677 (0.160)***
R^2	0.045	0.144
Adj. R^2	0.036	0.136
Num. obs.	1823	1709
RMSE	2.070	1.864
N Clusters	1231	1149
COVID-19 Positive		
No harm		
Unknown harm	−0.247 (0.152)	−0.524 (0.160)**
Active harm	−0.622 (0.137)***	−1.342 (0.154)***
Passive harm	−0.661 (0.172)***	−1.636 (0.177)***
R^2	0.052	0.183
Adj. R^2	0.042	0.175
Num. obs.	1769	1695
RMSE	2.023	2.028
N Clusters	1217	1130
Criminal History		
No harm		
Unknown harm	−0.111 (0.147)	−0.222 (0.141)
Active harm	−0.561 (0.136)***	−1.085 (0.138)***
Passive harm	−0.514 (0.156)**	−1.447 (0.156)***
R^2	0.028	0.131
Adj. R^2	0.019	0.123
Num. obs.	1806	1742
RMSE	1.909	1.803
N Clusters	1218	1148
Terror Watchlist		
No harm		
Unknown harm	−0.066 (0.139)	−0.268 (0.104)*
Active harm	−0.591 (0.137)***	−0.813 (0.103)***
Passive harm	−0.808 (0.155)***	−1.378 (0.131)***
R^2	0.045	0.105
Adj. R^2	0.036	0.096
Num. obs.	1853	1741
RMSE	1.832	1.600
N Clusters	1239	1167

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table B.8: Linear least squares regression of our outcome measure on indicators variables of the source of harm (government, airport security, smugglers, nature) and vignette number run separately for consequence of enforcement and whether the migrant was forced to leave (due to ethnic persecution, extreme poverty, or for medical treatment) or left voluntarily (for economic opportunity); standard errors clustered at the respondent-level. The table omits the coefficients on the intercept and vignette number for ease of display. Recall that there is no permutation in which economic migrants were subject to passive harm, as discussed in the experimental design section above. The regression presented here speaks to the analysis discussed with Figure 6.

	Economic migrant	
	Harm	Death
Government		
Airport security	−0.023 (0.110)	0.074 (0.106)
Smugglers	0.004 (0.093)	−0.056 (0.093)
Nature	0.154 (0.091)	0.159 (0.092)
R^2	0.012	0.020
Adj. R^2	0.008	0.015
Num. obs.	1654	1711
RMSE	1.218	1.244
N Clusters	1404	1470

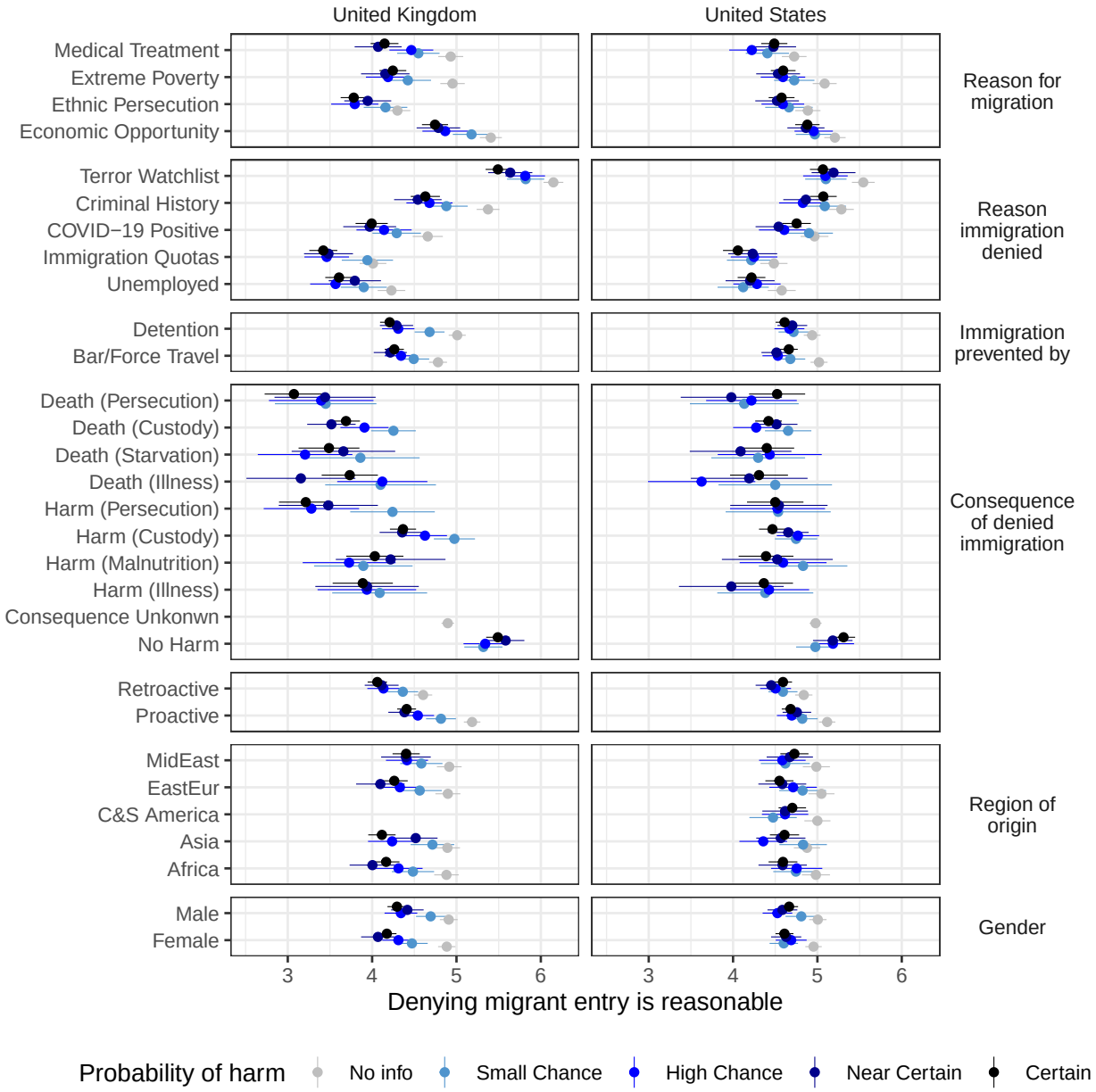
	Forced migrant	
	Harm	Death
Government		
Airport security	0.009 (0.063)	0.115 (0.067)
Smugglers	0.014 (0.056)	0.173 (0.058)**
Nature	0.065 (0.056)	0.233 (0.058)***
R^2	0.003	0.009
Adj. R^2	0.001	0.008
Num. obs.	4587	4434
RMSE	1.243	1.278
N Clusters	2915	2847

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

B.2 Additional figures

B.2.1 Study 1 and 2

Figure B.4: Marginal mean of how reasonable it is to deny a given migrant entry to the country by immigration case attribute and the between-respondent probability of harm treatment. We show 95% confidence bounds computed from standard errors clustered at the respondent-level. The figure omits the country of origin attribute for ease of display but categorizes the country of origin into a region of origin indicator.



B.2.2 Study 3: Robustness of tests of hypotheses 1-6

Figure B.5: Marginal mean of support for denying given migrants entry to the country by the reason why they migrated and whether migrants would not be harmed, non-lethally harmed, or killed through deportation.

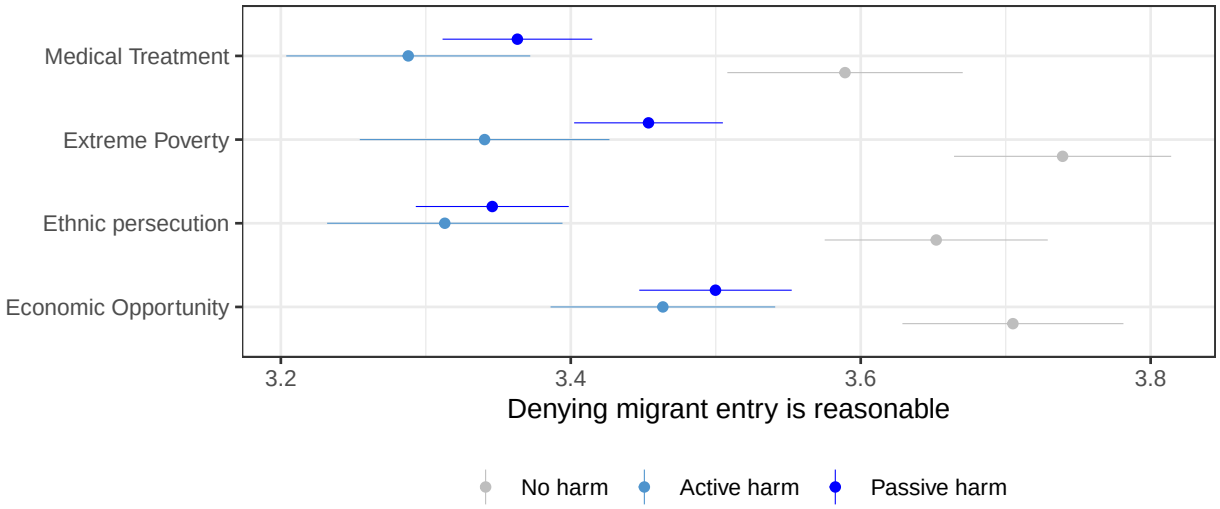


Figure B.6: Marginal mean of support for denying given migrants entry to the country by the reason for which entry was denied and whether migrants would not be harmed, non-lethally harmed, or killed through deportation.

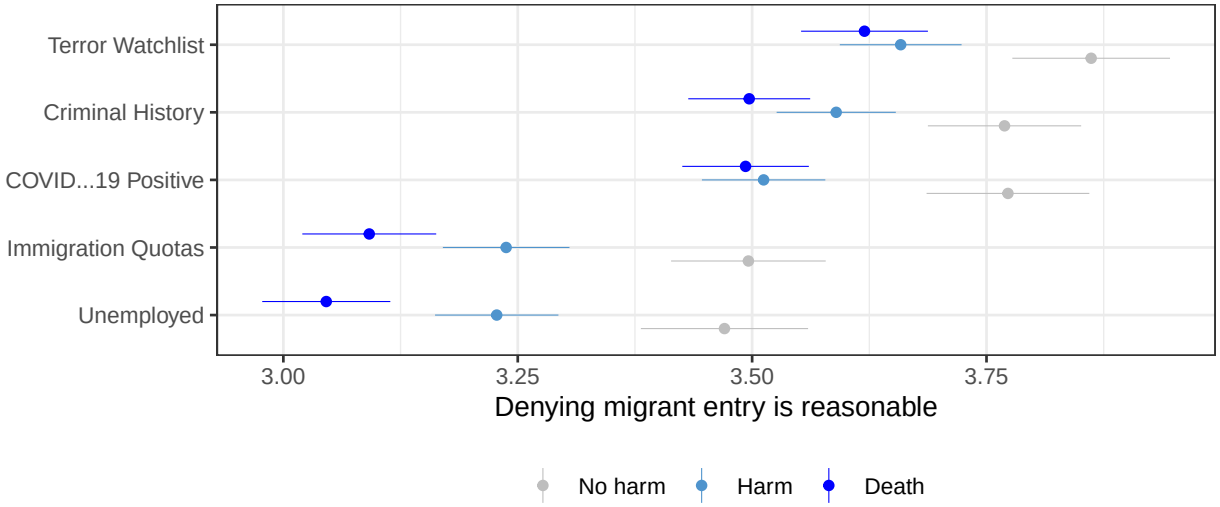


Figure B.7: Marginal mean of support for denying given migrants entry to the country by whether migrants would not be harmed, non-lethally harmed, or killed through deportation.

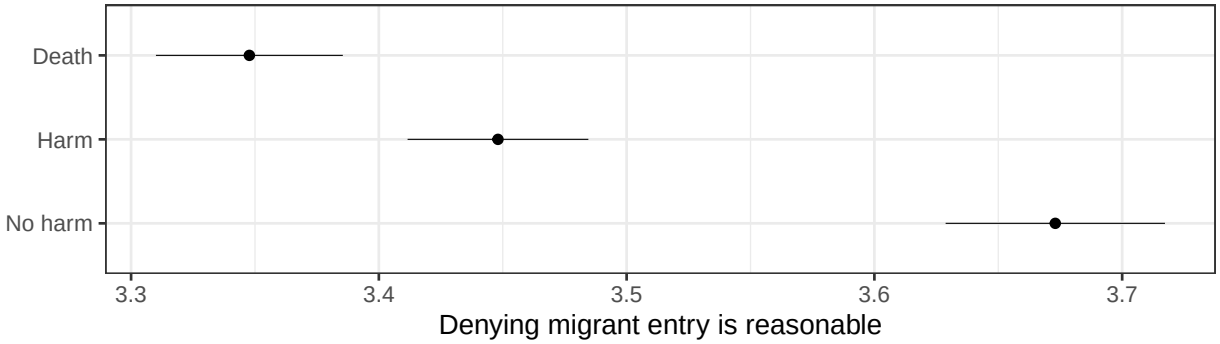


Figure B.8: Marginal mean of support for denying given migrants entry to the country by whether migrants would be harmed and whether that harm would result from deportation ("active harm") or circumstances in the country of origin ("passive harm").

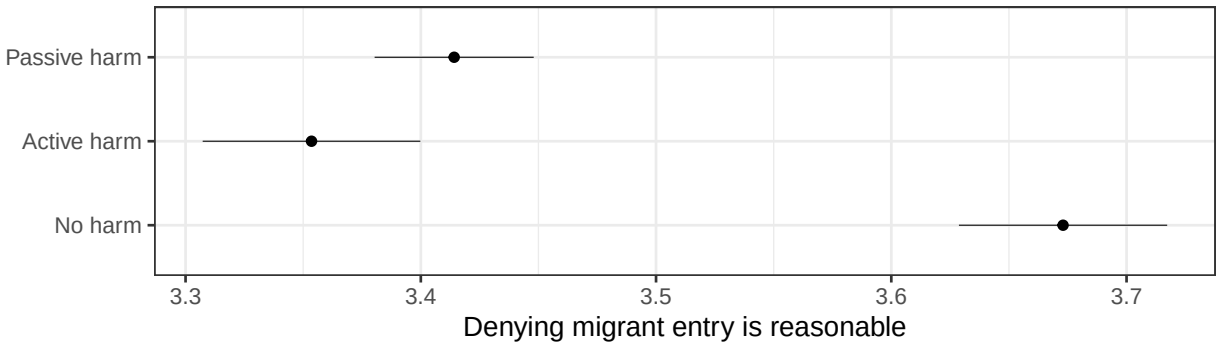
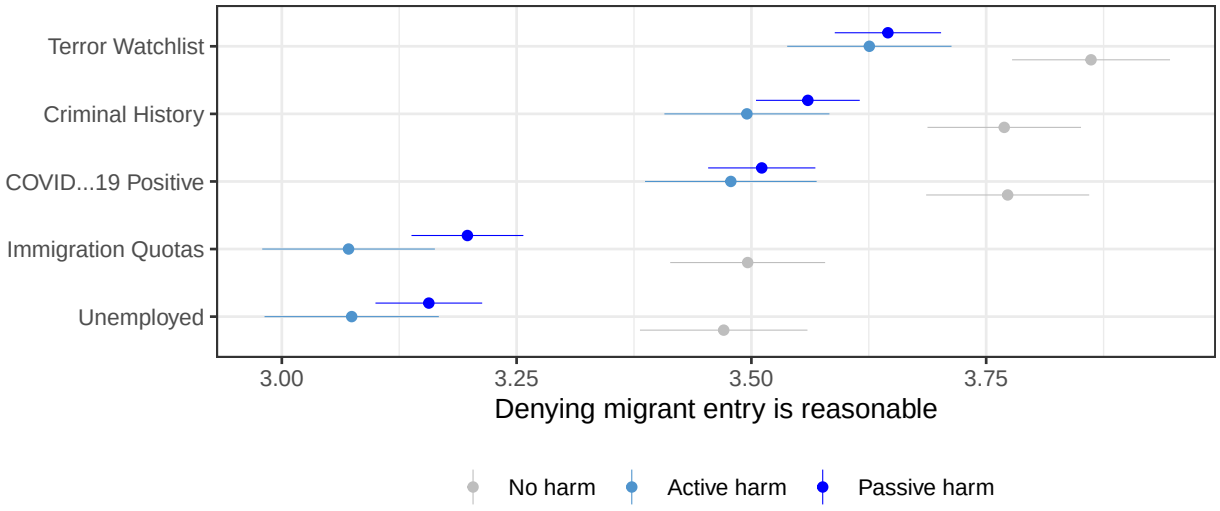


Figure B.9: Marginal mean of support for denying given migrants entry to the country by the reason for which entry was denied and by whether migrants would be harmed and whether that harm would result from deportation ("active harm") or circumstances in the country of origin ("passive harm").



C Additional analysis

The following analyses in this section rely on these questions:

Figure C.10: Moderating variables from Study 1 (UK sample).

Figure C.11: Moderating variables from Study 2 (US sample).

Figure C.12: Figures 1-2, reproduced from the main text, for median split of responses to specific questions about immigration attitudes in the United States.

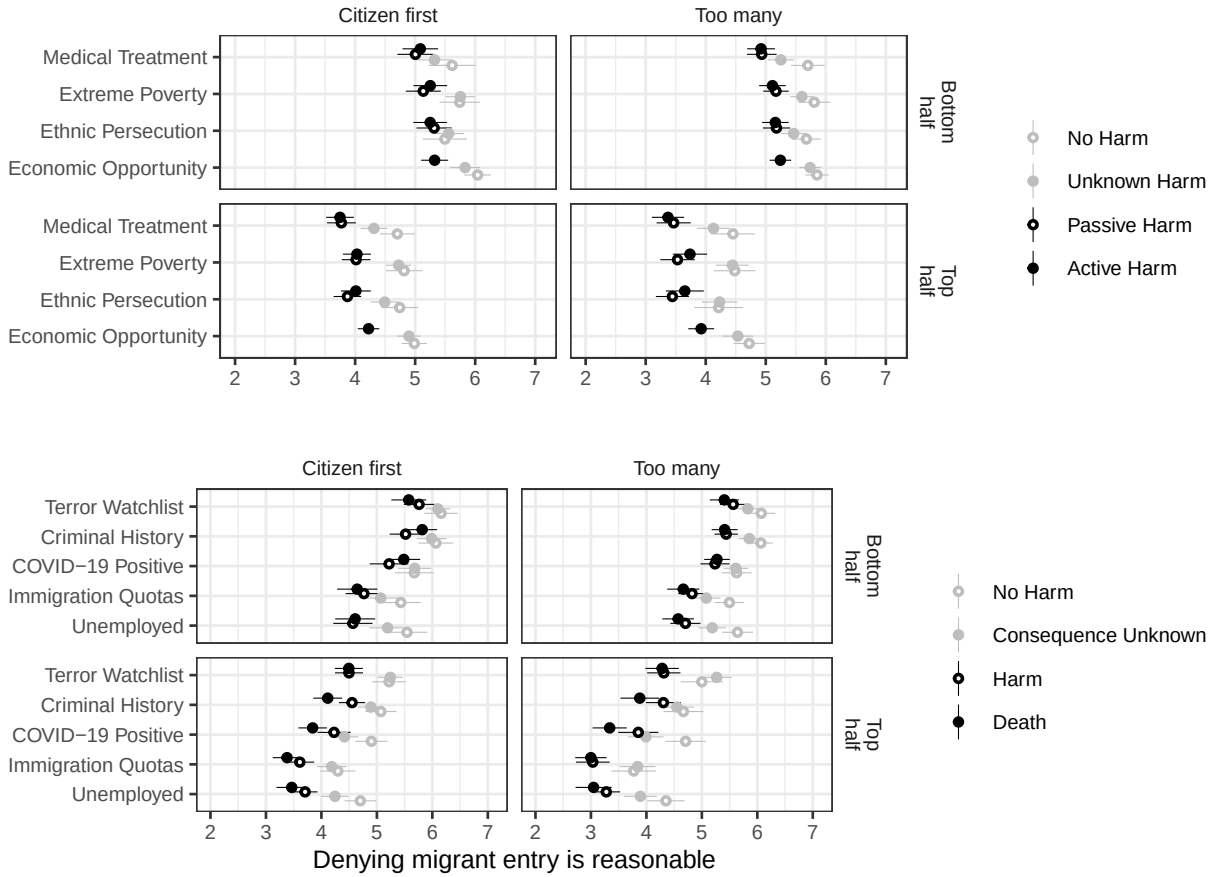


Figure C.13: Figures 1-2, reproduced from the main text, for median split of responses to specific questions about immigration attitudes in the United Kingdom.

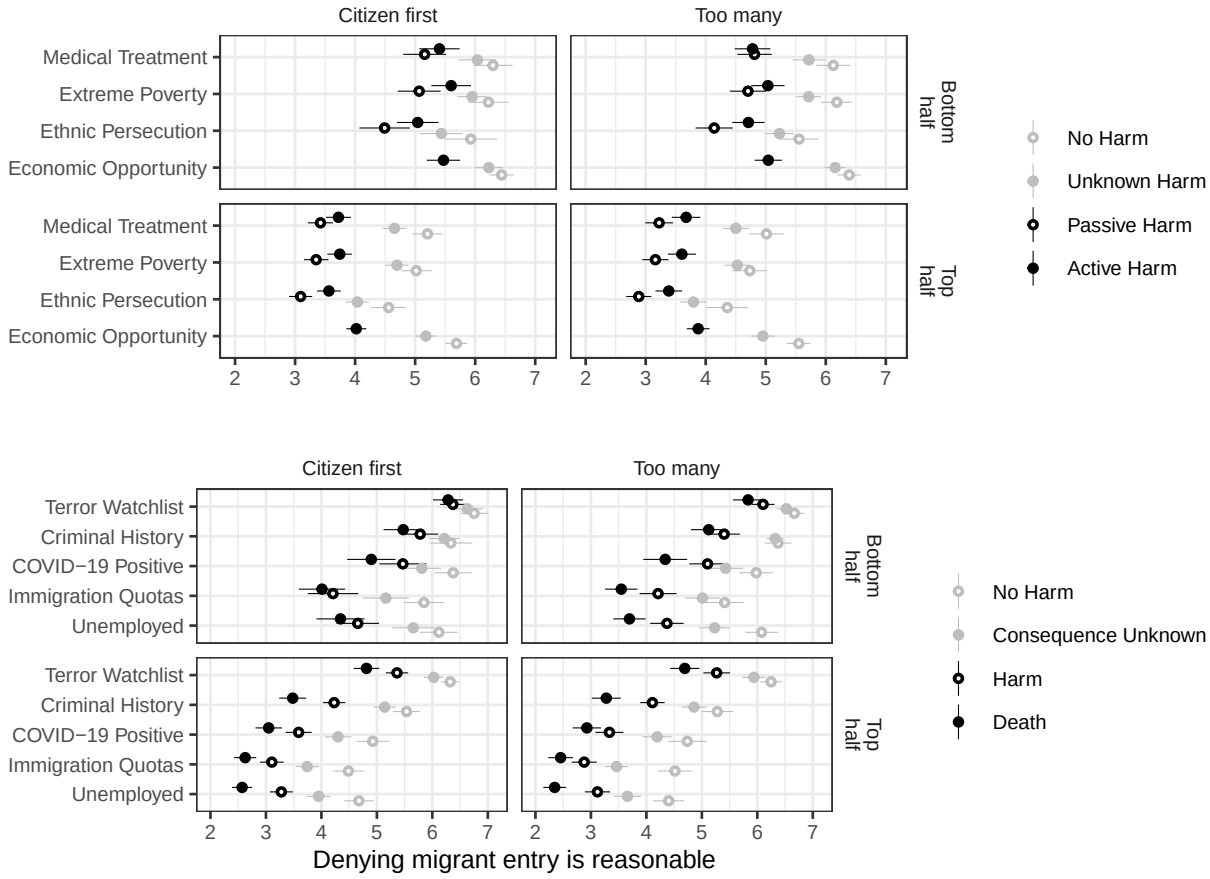


Figure C.14: Figures 1-2 for median split of responses to specific questions about immigration attitudes in study 3.

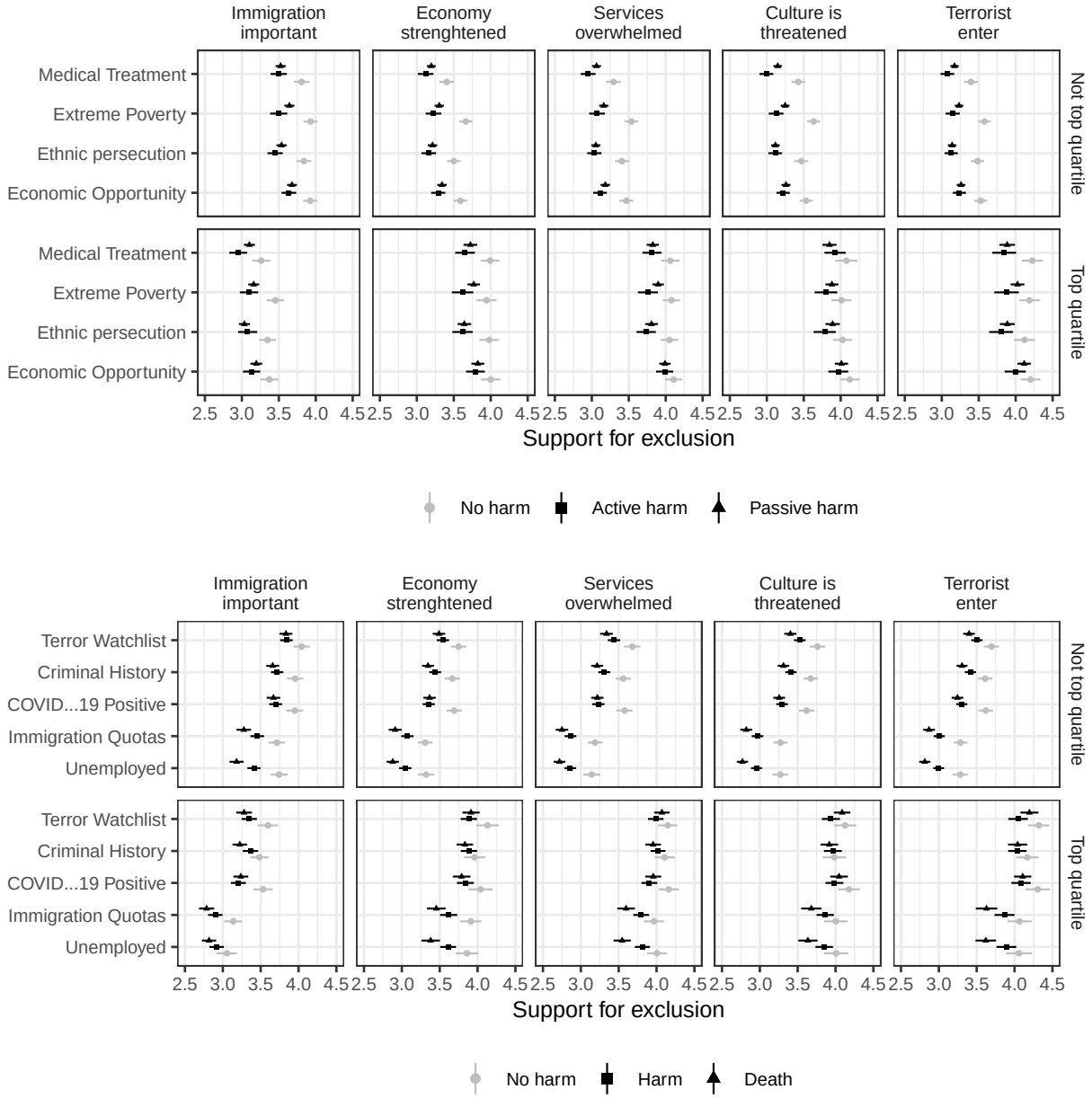


Figure C.15: Figures 1-5, reproduced from the main text, for median split of responses to specific questions about immigration attitudes in the United States.

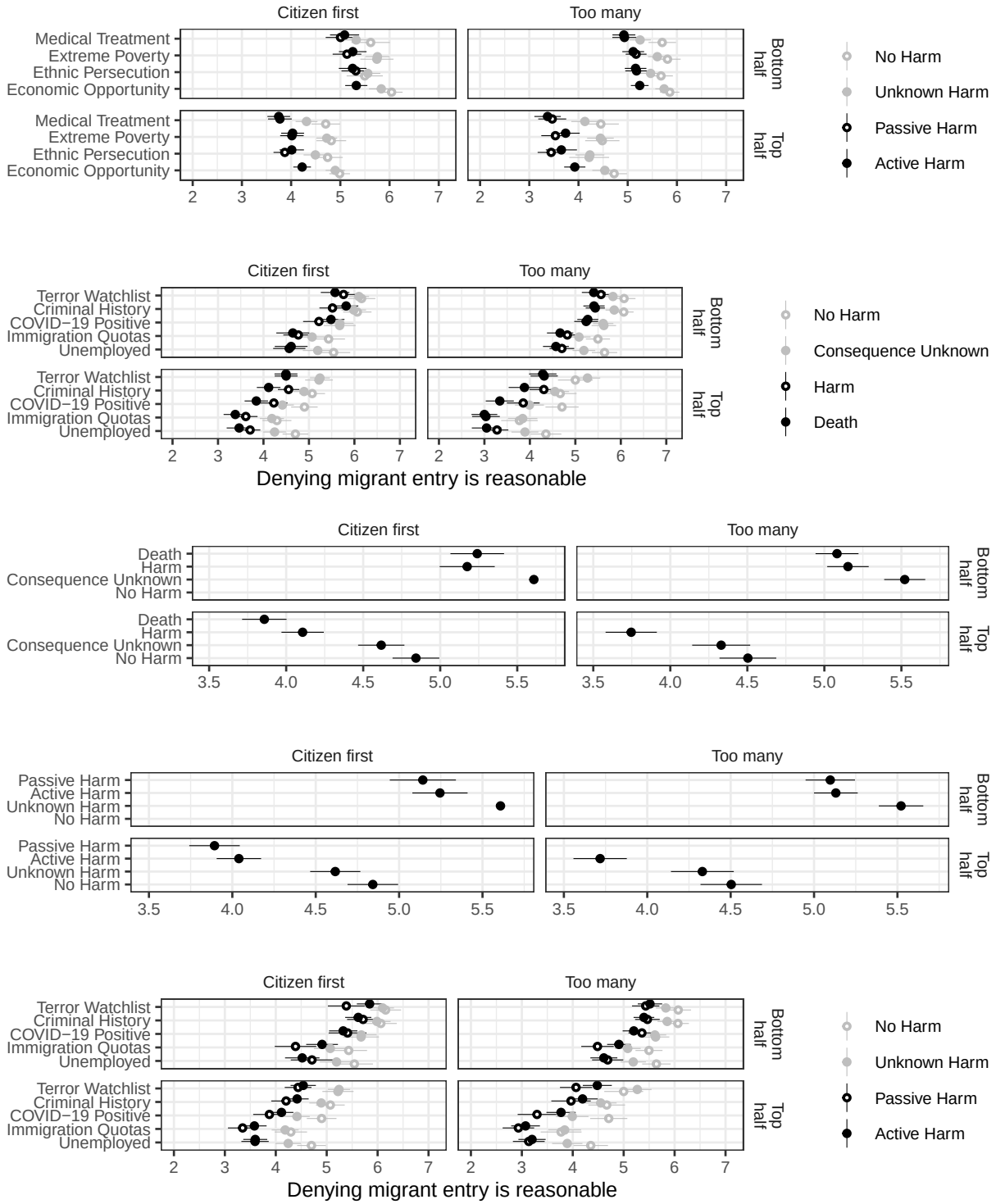
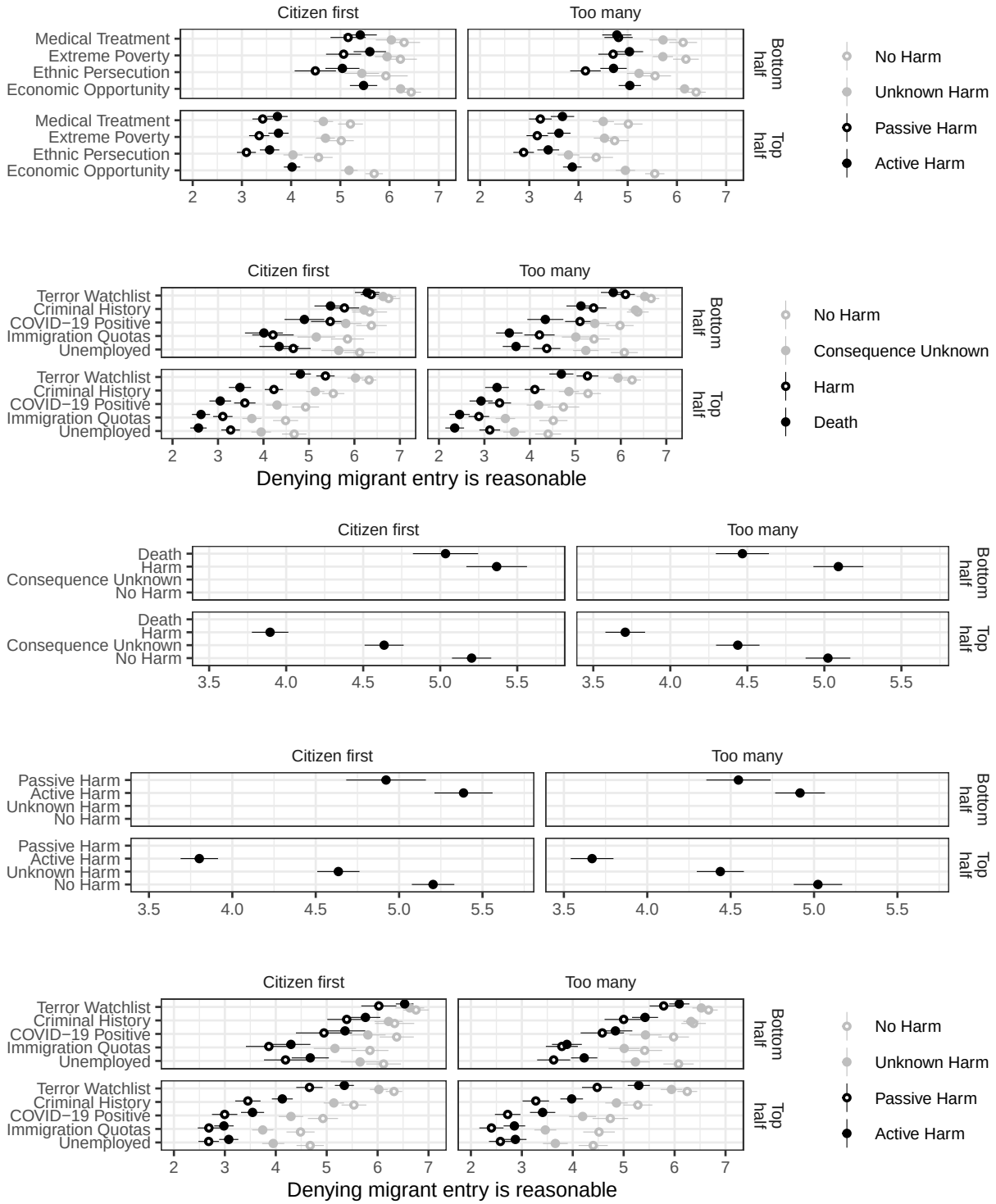


Figure C.16: Figures 1-5, reproduced from the main text, for median split of responses to specific questions about immigration attitudes in the United Kingdom.



D What are Experimental Vignettes?

Experimental vignettes are used by social scientists to evaluate whether certain features impact individuals' opinions (Hainmueller and Hopkins 2015; Turper 2017). For example, in one experiment social scientists presented subjects with vignettes of a single migrant who sought to access citizenship in Austria, but with each vignette varying in whether the migrant was from Nigeria, Iran, or Hungary; whether he was married and the nationality of his wife; whether he had any criminal complaints against him; whether he spoke proficient or only broken German; and whether he was unskilled or not. The goal of the researchers was to understand whether certain characteristics - like whether a migrant speaks fluent German, and whether he is married - impact people's opinions of whether the migrant should receive citizenship (Atzmuller and Steiner 2010). Vignettes are powerful tools for uncovering variations in opinions individuals may not know they have, but they have a limit: they are often simplistic. This is because, if vignettes vary along too many attributes, subjects may struggle to comprehend distinctions between vignettes, and some variants will be confusing or unrealistic. For example, in an earlier experiment we designed, we created vignettes of migrants which varied along many nationalities, professions, refugee statuses, criminal histories, and the number of migrants involved; this resulted in thousands of potential variants, including one involving millions of nurses from Canada who committed murder and sought to enter the US to flee persecution. The more attributes, the more likely an unrealistic vignette will arise, undermining the integrity of the experiment. Yet, to limit the number of attributes will result in only simple cases: opinions about very simple cases may not reflect the opinions of individuals in the real world with its full complexity.

We attempted to overcome this dilemma, designing vignettes that were both realistic and clear, yet still varying along a large number of dimensions. This required a large number of pilots, testing, and careful rewording of vignettes, to ensure that many attributes could be included without the need to remove any variants. This was crucial, as our goal was to capture opinions concerning enforcement without losing the nuance between the types, degrees, and probabilities of harm arising from enforcement.

In the end we designed a series of vignettes varying along no fewer than 8 attributes with 2-6 levels in the first two studies, and 2-12 levels in the third. This resulted in close to 38,400 potential combinations of attributes in the vignettes in the first study, and close to 48,000 in both

the second and third.[3] As noted in the main text of the article, in each study, subjects were randomly assigned five of these tens of thousands of vignettes, each one featuring unnamed fictional migrants seeking to enter or remain in the UK (study 1) or the US (study 2 and 3). They varied in degree of enforcement utilised to compel the migrants to leave or not remain, the agent which utilised enforcement, and whether the enforcement occurred at the border or in their home countries. We additionally varied migrants' reasons for migrating or attempting to migrate, and whether they sought to enter or remain in the UK/US, as well as the migrant's gender (study 1 and 2) and country of origin (all studies).

[3]It was only close to this number, as we removed some combinations which were highly unrealistic.

E Liability

The philosophical analysis on liability rests on a particular view of liability. Some reject this view, holding that an agent can be liable to harm even if not responsible for their actions. For example, if X will unknowingly spread a virus to Y unless X is stopped from moving, X might not be responsible for her actions, but Y can sometimes permissibly harm X to the same degree as someone who is responsible, if this is necessary to stop her from moving and spreading the virus. This is because X has a duty to ensure her body does not cause harm, and so a duty to bear more costs to prevent her body causing harm than the costs Y must bear. It is therefore often permissible to stop Y facing harm by causing X the same harm that would be permitted against someone responsible for the threat she poses (Tadros 2011; Frowe 2014). It might similarly be permissible for a state to temporarily restrict the entrance of even forced migrants if they pose harms, causing them the same harm that would be permitted against voluntary migrants. For example, it might be justified for a state to require that a refugee remain in quarantine for a short amount of time during a pandemic, even if this involves the same harm that non-refugees face in quarantine, because even refugees have some duty to ensure their bodies do not cause harm to others.

However, even in such cases, the proportion of permissible harm caused to harm averted might still vary when the harm is above a given threshold. Quarantining does not involve a high (or even moderate) chance of death or injury. When enforcement does involve a high or moderate chance of death or injury, then the importance of responsibility for liability becomes important. For example, it may be permissible for a state to issue long-term detention against completely voluntary migrants attempting to cross a border during a pandemic, but not against forced migrants. For the latter, the detention could involve more harm than justified for the ends of slowing down the spread of the virus, in virtue of the migrants not being responsible for the threat they pose.

F Carrier Sanctions

We argued in the main text that carrier sanctions are subject to proportionality constraints. However, they remain different to other cases of intervening agency. Not only might harms from carrier sanctions be less severe, as already noted, but even when harms are severe, they can potentially be discounted when there are many intervening agents between the government issuing the sanction

and the agent directly issuing harm. For example, if the government threatens to sanction carriers, and carriers block migrants from boarding a flight, resulting in migrants being forced to live in countries where they suffer torture from a militia, then the government causes harm via one intervening agent - the carrier - which then contributes to harm from another intervening agent - the militia. It is possible that, the more intervening agents there are along a causal chain, the more harm can be discounted. Even if this is not true, harm is perhaps more difficult to foresee when the causal chain involves multiple agents, as opposed to just one or two.

Regardless of the truth of these last claims, there is good reason to view carrier sanctions as distinct from both direct coercion, as they involve intervening agency in a range of cases, and distinct from merely failing to help, as they involve the government engaging in a threat that causally contributes to coercion. Given these facts, carrier sanctions ought to be subject to the usual proportionality constraints, even if the harm can often be discounted as compared to harm that is more direct.

There is one additional question, somewhat related to carrier sanctions, which we lack the room to fully address: whether simply denying a visa can be wrong in virtue of causing disproportional harm. Simply denying a visa does not itself involve force, especially when the migrants' only reason for choosing to remain in a home or transit country is to follow the law, rather than fear of coercion. We think that such cases may not be subject to proportionality constraints, because (as articulated earlier) we assume proportionality constraints are only relevant when force or coercive threats are used. However, some might disagree: perhaps merely denying someone permission, and this causing harm, can render the act disproportional in virtue of the harm. As far as we are aware, no philosophers have addressed this question, and due to lack of space we shall not either. We will only conclude this: when states threaten to engage in force if migrants attempt to enter or remain in the state without a visa, this force or threat can lack proportionality.

References

Atzmuller, Christiane, and Peter M. Steiner. 2010. "Experimental Vignette Studies in Survey Research". *Methodology* 6 (2): 128–138.

Egami, Naoki, and Kosuke Imai. 2018. "Causal interaction in factorial experiments: Application to conjoint analysis". *Journal of the American Statistical Association.*

Frowe, Helen. 2014. *Defensive killing*. Oxford University Press.

Hainmueller, Jens, and Daniel J. Hopkins. 2015. "The Hidden American Immigration Conensus: A Conjoint Analysis of Attitudes Towards Immigrants". *American Journal of Political Science* 59 (3): 529–548.

Hainmueller, Jens, Daniel J Hopkins, and Teppei Yamamoto. 2014. "Causal inference in conjoint analysis: Understanding multidimensional choices via stated preference experiments". *Political analysis* 22 (1): 1–30.

Tadros, Victor. 2011. *The ends of harm: The moral foundations of criminal law*. OUP Oxford.

Turper, Sedef. 2017. "Fearing what? Vignette experiments on anti-immigrant sentiments". *Journal of Ethnic and Migration Studies* 43 (11): 1792–1812.