Discrimination that Matters: Replication with Extensions of "Perceived Discrimination and Political Behaviour" (2020)

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Abstract

This paper offers a replication of Oskooii, Kassra A. R. 2020. "Perceived Discrimination and Political Behavior". *British Journal of Political Science* 50 (3): 867–892. with two extensions. Oskooii (2020) offeres solid evidence that exposure to societal discrimination turns minorities away from mainstream political participation and political discrimination facilitates mainstream political participation, whereas both political and societal discrimination inspire stronger in-group attachment. This paper brings two robustness checks and two extensions. Robustness checks re-estimate original models by altering control matrix and by introducing new outcome variables. Extensions apply matching methods to original data and re-estimate original models using a survey of newly arrived immigrants. Results indicate that Oskooii's theoretical mechanism cannot be straightforwardly applied to other forms of political behaviour, while the application to other populations, such as immigrants, is limited in scope. This replication also finds that exposure to political and societal discrimination could be regarded as a cause of ethnic-based engagement, while exposure to political discrimination could be regarded as a cause of mainstream political participation.

Keywords: discrimination, minorities, immigrants, ethnicity, replication

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Introduction

In the light of an intense immigration debate and increasing support for the anti-immigrant agenda, widespread discrimination against minorities and immigrants received more attention in political psychology (Dancygier and Margalit 2020; Lajevardi 2020; Valentim 2021). Moreover, the focus also shifted onto political consequences of discrimination (Pérez 2015; Hobbs and Lajevardi 2019; Lajevardi 2021; Matthes and Schmuck 2017). This paper presents a replication (two robustness checks and two extensions) of "Perceived Discrimination and Political Behaviour" by Kassra A. R. Oskooii (2020) published in the British Journal of Political Science. The paper builds on author's previous work (Oskooii 2016), providing solid evidence that exposure to societal discrimination demotivates people from participating in mainstream politics, while exposure to political discrimination enhances it. Such evidence was recognised as valuable and the theory coherent among scholars in migration studies and political psychology.[1]

Overall aim of this study is to improve understanding of the effects of political and societal discrimination on political behaviour. To accomplish this, the study devises three further aims. The first aim is to extend the analysis from original paper using causal inference methods (matching). This would allow for exposure to political or societal discrimination to be interpreted as a cause of political behaviour in more straightforward manner. The second aim is to inspect if political and societal discrimination impact other forms of political behaviour the way they impact voting, ethnic-based engagement and identity

[1]By February 2025, the original paper had got 153 citations on Google Scholar. It is also important to notice that numerous papers on minority and ethnic politics published in the top three journals in political science or relevant publications in migration studies and political psychology also cite this paper.

choice. The third and final aim is to check if the same effects of discrimination appear in other populations similar to minorities, such as newly arrived immigrants. The paper is organised in four sections. The first section provides the overview of the original paper, while the second presents the design and steps of each of the replication studies. Section three brings the analysis and results, followed by discussion and conclusion in the fourth section.

Understanding Discrimination: An Overview of the Original Paper

Oskooii conceptualises discrimination as an outcome of prejudice - a derogatory belief or attitude about individuals generalised on the basis of their group memberships (Oskooii 2016, 2020), which entails making a distinction between individuals or social groups through favouring of or against them, due to their membership to the group or some other group traits (Oskooii 2020, 869). The major theoretical contribution of Oskooii (2020) is conceptual development mechanism through which political and societal discrimination achieve their (divergent) impact on political behaviour. Political discrimination exists through "laws, policies, practices, symbols, or political campaigns and discourse that aim to deprive some citizens of resources or rights based on group membership" (Oskooii 2020, 868). Societal discrimination happens in day-to-day interactions of individuals and is less systematic in character (Oskooii 2020). The difference in these two types of discrimination is in their source, and in both types targets of discrimination could be

individuals and groups.

Existing research indicate that perceived discrimination has numerous and sometimes divergent consequences. Among the most prominent consequences of perceived discrimination are increased levels of anxiety and decrease in self-esteem (Schmitt et al. 2014; Bourguignon et al. 2006). Political consequences of perceived discrimination are usually studied among minority populations, since they are exposed to higher levels of discrimination (Lajevardi 2020; Lajevardi et al. 2020; Pérez 2015; Ward 2019). Literature that maps divergent consequences of perceived discrimination on mainstream political participation. Schildkraut (2005) finds that discriminated individual usually retreat from mainstream politics and turn to their in-group (Schildkraut 2005). More recent research (i.e. Tyrberg 2020) demonstrates the opposite, that exposure to discrimination can lead to more electoral participation.

Based in social identity theory (Tajfel and Turner 2010, 2004; Huddy 2013), Oskooii (2020) proposes that societal and political discrimination produce diverging effects on political behaviour. Revising existing research, Oskooii (2020, 2016) claims that societal discrimination causes withdrawal from mainstream politics because individuals feel powerless, isolated and anxious due to exposure to individual targeting. On the other hand, political discrimination, because is more systematic, equips targeted individual with the sense of shared fate with other group members, which could inspire engagement with mainstream politics (Oskooii 2020, 2016). Yet, in the case of in-group engagement, Oskooii (2020) proposes that both types push individuals to engage more with their

in-group. Societal discrimination would make individuals seek comfort and solace in their in-group, while political discrimination would make them seek protection in numbers and possibility of action against discrimination (Oskooii 2020, 2016).

Oskooii (2020) utilises comprehensive British Election Study Ethnic Minority Survey, (EMBES) conducted in 2010 (Fisher et al. 2012). This survey was conducted on a representative sample of British ethnic minorities, collecting in total 2.787 interviews using computer-assisted personal interviewing technique. Oskooii (2020, 873-874) provided and tested four hypotheses:

1. On average, exposure to political discrimination increases the likelihood[2] of political participation.

2. On average, exposure to societal discrimination decreases the likelihood of (mainstream) political participation.

3. Exposure to societal discrimination, on average, enhances in-group attachment and engagement.

4. Exposure to political discrimination, on average, enhances in-group attachment and engagement.

Oskooii (2020) tests these hypotheses through four outcomes; mainstream political participation is operationalised as voting in local and general elections (binary indicator), while in-group engagement is operationalised through participation in ethnic-based

[2]Reviewer noticed that terms likelihood and probability are confused here. I leave the original hypotheses in the phrasing faithful to the original paper, but I use term probability in newly formulated hypotheses.

organisations and clubs (binary indicator). Attachment is operationalised through preferred identity scale, ranging from (0) for identifying more with in-group identity, over (1) for identifying equally with in-group and out-group identities, to (2) for identifying more with out-group identity. Societal and political discrimination were operationalised through 12-point index where 0 represents no discrimination whatsoever, while 12 represents highest possible score of discrimination. Index represents a complex measure that provides information about experience of specific types of discrimination (i.e. experiencing discrimination during job application process or in a restaurant) and the frequency of their occurrence, both measured on individual levels. [3]

In the original study, Oskooii (2020) uses an extensive set of controls. This set includes socio-demographic variables including gender, age, education, income level, ethnicity, use of English and country of birth; political variables including political interest, political knowledge, party identification, attitude towards voting as duty, political efficacy, satisfaction with democracy and trust in parliament; remaining variables include worship attendance and identification with British, ethnic or both identities. Up to date literature (Sanders et al. 2014; Baysu and Swyngedouw 2020; Moutselos 2020) indicates that Oskooii (2020) indeed uses a suitable set of control variables in the models assessing the impact of societal and political discrimination on voting in local and general elections. The literature about democratic engagement of minorities (i.e. Heath 2015) also indicates that Oskooii (2020) mostly uses relevant controls. Verkuyten and

[3] Oskooii's way of measuring discrimination is more refined than the usual scope of large representative surveys that catch experience of discrimination through binary measures (i.e. the ESS) or do not ask questions about frequency of discrimination.

Martinovic (2012) demonstrates that political variables also have considerable impact on identification among immigrants (in broad meaning which could encompass minorities), which suggests Oskooii's (2020) controls were not misplaced in this case. In spite of following established practices in large-N research about minorities, there is a potential problem of overcontrolling[4], which remains out of focus in this replication study.

Oskooii (2020) uses logit and multinomial models to test his hypotheses. Analysis provided evidence in support of all four hypotheses. Coefficients (Oskooii 2020) demonstrate directionality in accordance with the hypotheses and achieve statistical significance in 0.1 level. To validate the results, each model is accompanied by analysis of changes in predicted probabilities (using first difference methods). This analysis also confirms initial results. Oskooii (2020) provided two other robustness checks. One was to estimate so called simplified models from which attitudes about voting and political efficacy, satisfaction with democracy, and trust in parliament were omitted. These models also provided support for Oskooii's hypotheses. Another way of checking robustness was to simplify indicators of societal and political discrimination to only street-level discrimination and discrimination in governmental services (Tables 5 and 6 in the Online Appendix of the original paper), which also confirmed initial results.

[4]I thank the reviewer for this remark.

Replication Design

This replication paper[5] is organised in 4 separate studies. Studies 1 and 2 rely on the same sample and apply the same methods as the original study (Freese and Peterson 2017, 152). Study 1 re-estimates original models with different set of control variables, while Study 2 re-estimates original models with new outcome variables. Study 3 applies matching as different methodology on the original dataset (Clemens 2017). Study 4 applies approximate analytical procedure of the original study on a different dataset, which situates it in the realm of conceptual replications (Clemens 2017; Freese and Peterson 2017; Irvine 2021; Stroebe and Strack 2014). The aim of Studies 1 and 2 is to check robustness of original results with respect to different controls and outcome variables. Study 3 intends to extend original conclusions by testing for causal effects of different types of discrimination on political behaviour. Study 4 aims to extends the original analysis on different population of newly arrived immigrants (in UK and the Netherlands).

Differences in methodologies and samples incur differences in theoretical estimands between studies in this replication (Lundberg, Johnson, and Stewart 2021). Studies 1 and 2 speak to the same population as the original paper (Oskooii 2020) - ethnic minorities in UK. Considering the scope of British Election Study Ethnic Minority Survey (Fisher et al. 2012), these are more precisely racial minorities from former British colonies. In the original study theoretical estimands represent difference in whether

[5]Original study is completely and accurately reproducible based on the data and code available in the Harvard Dataverse Repository: https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/4S2NIW.

a respondent *i* would have a higher probability of casting a ballot in general or local elections/engaging in ethnic-based organisations/embracing British or both British and their ethnic identity compared to their ethnic identity if they reported specific levels of societal or political discrimination. Exactly the same set of estimands is used in Study 1. In Study 2 theoretical estimands are changed to differences in probability of support for violent protests and differences in probability of non-electoral political participation for a respondent *i*, with respect to reported levels of societal and political discrimination.

Study 3 and 4 introduces different theoretical estimands and change target populations. The estimands in study 3 are differences in probability of casting a ballot on general or local elections and engaging in ethnic-based organisations for respondent *i* if they reported exposure to either societal or political discrimination. In Study 3 the population in focus are ethnic minority individuals in UK, but the effect estimated stretches onto the population of discriminated individuals. In Study 4 theoretical estimand represents the difference probability of ethnic-based engagement and difference in probability of supporting the attitude about irreconcilability between host-country and immigrant cultures for individual *i* with respect to exposure to societal and political discrimination. Population in Study 4 are immigrants who arrived in the period of three years prior to fielding a survey in UK or the Netherlands.

Study 1 presents a set of robustness checks for the original models. Robustness checks introduce alternative matrix of control variables compared to the original paper. Two approaches to alternative control matrix are used in Study 1. The first approach relies

on using a more informative controls where Oskooii (2020) used binary indicators. Henceforth, I used a continuous measure of party identification instead of binary and instead of country of birth, I introduced indicators for UK citizenship and duration of stay in UK.[6] The second approach is to expand the simplified model based on the current literature about mainstream political participation (Wysocki, Lawson, and Rhemtulla 2022). Variables that measure attitudes about voting and political efficacy, satisfaction with democracy and trust in parliament are replaced with evaluations of individual and national finances in the past and future (Healy, Persson, and Snowberg 2017; Hansford and Gomez 2015; Lewis-Beck, Nadeau, and Elias 2008; Wlezien, Franklin, and Twiggs 1997), involvement in local community affairs and perception of increase in prejudice among out-group (La Due Lake and Huckfeldt 1998; Teorell 2003; Giugni, Michel, and Gianni 2014; Teorell 2003; Giugni, Michel, and Gianni 2014). Social identity theory would also suggest that minority individuals with stronger community involvement[7] and greater perception of prejudice might be more inclined to voting, while the literature on economic voting suggests that both individual and sociotropic evaluations push people to cast a ballot (Schmitt et al. 2014; Healy, Persson, and Snowberg 2017; Hansford and Gomez 2015). Yet, this literature does not give an account of economic evaluations' impact on in-group attachment and engagement, therefore economic evaluations will not be used in re-testing hypotheses 3 and 4.

Study 1 tests exactly the same set of hypotheses as the original paper. Study 1 contains

[6] More details are available in the Section 2, Appendix

[7] Reviewer suggested that community involvement might also moderate the effects of societal and political discrimination. I retested each model containing this variable for three different moderation effects, but not a single effect is statistically significant. Results are available in Section 4, Appendix.

checks for the linearity assumption, heterogeneity and significant outliers (Pregibon 1981).[8] Replicated and original models are compared regarding the directionality of effects (which are directly comparable, Wooldridge 2010) and statistical significance which requires additional caution because of differences in sample sizes (Anderson and Maxwell 2016).[9] Following the original paper, results are reported as regression coefficients and as predicted probabilities (obtained with first difference method). Due fixed variance of the error term in logit models, the effect of the key treatment variable also contain degree of unobserved heterogeneity (Mood 2010; Wooldridge 2010). For that reason the comparability of effects' sizes from different logit models is not as straightforward as in OLS models (Breen, Karlson, and Holm 2018), but it is through average marginal effects of societal and political discrimination (Kuha and Mills 2020; Breen, Karlson, and Holm 2018).

Study 2 presents the estimation of original models using different outcome variables: non-electoral participation[10] and support for violent protests. Non-electoral participation is yet another form of participating in mainstream politics, which inquires higher costs of engagement than voting. Recent research indicated that broadly defined discrimination increases non-electoral participation of minorities (Bilodeau 2017; Tran, Baluran, and Hassan 2024; van Zomeren, Postmes, and Spears 2008). Bilodeau et al. (2023) finds that exposure to discrimination fosters protest participation. Schmuck and Tribastone (2020)

[8]Tests were kindly suggested by the reviewer.

[9]For that reason I report confidence intervals beside *p-values*.

[10]Non-electoral participation includes forms of political engagement that are neither voting, nor ethnic based, but are close to understand as civic engagement with intention to influence politics through means such as protesting, signing petitions, volunteering in civil society or trying to reach one's political representatives. Additional details are provided in Section 5, Appendix.

report narrower effects of harmful speech on support for only non-violent protests. However, exposure to discrimination can lead to higher support for violence (Grewal and Hamid 2024). On the other hand Besco et al. (2022) causally demonstrated that exposure to harmful political speech (closer to political discrimination) does not have an effect on political engagement or protesting. Support for violent demonstrations is the least mainstream form of participating in politics, but very relevant, specially for minorities exposed to discrimination (Schmuck and Tribastone 2020; Schmuck, Matthes, and Paul 2017; Grewal and Hamid 2024). Therefore I propose and test four hypotheses in Study 2:

1. On average, exposure to political discrimination increases the probability of non-electoral political participation.
2. On average, exposure to societal discrimination increases the probability of non-electoral political participation.
3. On average, exposure to political discrimination increases the probability of support for violent protests.
4. On average, exposure to societal discrimination increases the probability of support for violent protests.

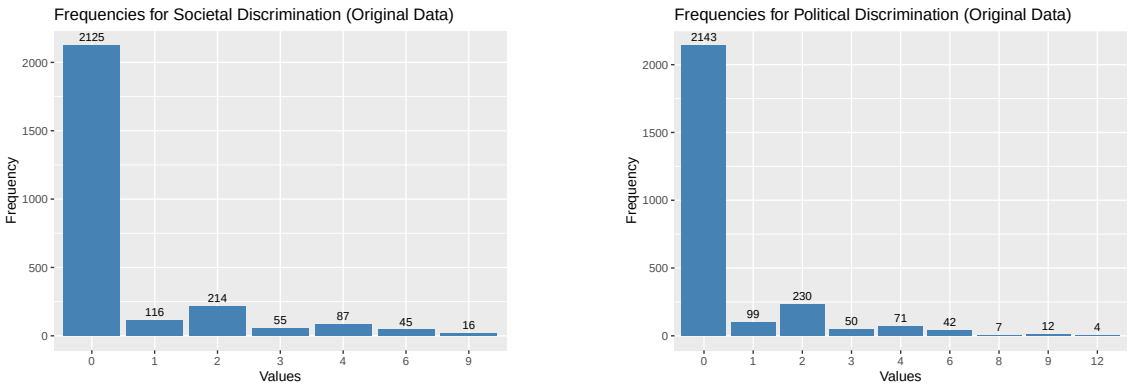
Study 3 re-estimates original models using matching (Ho et al. 2007; Iacus, King, and Porro 2019). The original paper does not offer any causal claims, therefore this study attempts to extend the original research towards establishing causal effects of societal

or political discrimination. Application of the matching procedure requires binary treatment. Therefore, only effects of single type of discrimination could be estimated through matching. The entire control matrix from original models (complete and simplified) was used to match on, as well as the type of discrimination that did not serve as a treatment. Matching on the entire set of controls imitates experimental conditions by equalising the sample in all aspects except exposure to either political or societal discrimination that serves as the treatment. For simplicity of the analysis, matching was applied on binary outcome variables (mainstream political engagement and ethnic-based engagement), while identity choice was left out. Additionally, Figure 1 indicates that distribution of political and societal discrimination in original models is skewed towards absence of discrimination and lower levels of exposure, leaving high levels of exposure relatively rare. Matching helps to overcome this lack of balance in the data, but also relies on less informative treatment (leaving out the information about intensity of discrimination and retaining just the information about reported exposure to it). This study tests several hypotheses:

1. Societal discrimination causes decrease in probability of voting in general elections.
2. Poltical discrimination causes increase in probability of voting in general elections.
3. Societal discrimination causes decrease in probability of voting in local elections.
4. Political discrimination causes increase in probability of voting in local elections.
5. Societal discrimination causes increase in in-group attachment and engagement.

6. Political discrimination causes increase in in-group attachment and engagement.

Figure 1: Distribution of Frequencies for Specific Types of Discrimination



(a) Societal Discrimination

(b) Political Discrimination

Models in Study 3 are re-estimated using propensity score matching (Guo, Fraser, and Chen 2020; Ho et al. 2007; Stuart 2010). Following the advice of King and Nielsen (2019), I checked that in every instance, propensity score matching indeed improves the balance in the data (see Appendix, Graphs 4 to 15 and Tables 25 to 36 used in the matching procedure).[11] Inspection of different measures, such as standardised mean difference and cumulative distribution function measures (CDFmax) indicated that different methods and links achieve varying, although similar levels of balance on individual variables, but varying levels of total balance in the dataset. Because of that matching was performed using combinations of different methods (optimal full matching, nearest neighbour

[11]The initial idea which was pursued at first was to use coerced exact matching. Unfortunately, this method failed to improve overall balance of the dataset, even thought it improved balance in every particular variable. As Iacus, King, and Porro (2012) indicated the aim of the method is to improve the overall balance of the dataset for matching to be applied successfully. With multivariate imbalance measure equal to 1 in all iterations, coerced exact matching was replaced with propensity score matching. Complete results and the code are available in Section 8, Appendix.

matching and optimal pair matching) and links (probit and logit) (Ho et al. 2011), which are reported together. This logic of reporting is intended as a robustness check and demonstrating that results are not a relict of the chosen matching procedure or sensitive to specific level of balance achieved.[12] After matching procedure was applied, models were re-estimated using weights from matching. Causal effect is estimated as average treatment effect on the treated (ATT)[13] was computed with means of G computation and reported in the form of risk ratios and odds ratios respectively (presented from Table 43 to 54 in the Appendix).

Study 4 brings the study of effects of perceived discrimination among newly arrived immigrants. The original paper finds effects of perceived discrimination on the sample of minorities that have been living in the UK for longer periods of time (Oskooii 2020). Newly arrived immigrants are the population from which established minorities originate, but newly arrived immigrants lack the experience of living in the host country and their contact with the host country national is more limited compared to minorities. Study 4 utilises the first wave of "Causes and Consequences of Socio-Cultural Integration Processes among New Immigrants in Europe" (SCIP) dataset were collected in 2010 and 2011 in the UK, Ireland, Germany and the Netherlands (Diehl et al. 2016). The main advantage of this dataset is the period of data collection which for the most part comes

[12]Complete explanations of differences between matching methods are available in (Greifer 2023). As suggested in the vignette, ATT as desired estimand could be estimated using any procedure. Vignette justifies the logic of analysis and reporting stating that in case of estimating ATT that 'no method can be recommended above all other' (Greifer 2023)

[13]MatchIt allows for estimation of the average treatment effect (ATE) as well, but it was more pertinent to estimate the effect of discrimination inside the group individuals who reported it, instead of the entire sample (Ho et al. 2011).

close to that of EMBES data (Fisher et al. 2012). Small time difference is important because it implies less impactful contextual differences that could render datasets incomparable, despite containing the same set of variables (Van Bavel et al. 2016). The SCIP data cover only two groups of immigrants in UK, Polish and Pakistani, which is significantly less than coverage of EMBES. For that reason, this study includes estimates from the first wave of SCIP in the Netherlands. Additional problem is that only a small fraction of the sampled immigrants reported discrimination (see Figures 21 and 22 in the Appendix). Due to a very low number[14] of discriminated respondents, the analysis should be taken with caution. Descriptive statistics for key treatment and control variables is provided in the Appendix (Tables 66 to 70).

SCIP dataset (Diehl et al. 2016), provides a set of variables only partially comparable to EMBES, where key treatment was measured through instances of discrimination and their frequency. Key limitation to comparability is that instances of discrimination were measured on individual level, while frequency of discrimination was measured on the group level. Because instances of discrimination still allowed for differentiation between societal and political discrimination, I created two different treatments: (1) a three-point scale summing up the instances of discrimination and (2) the a six-point index that combines individual instances with opinion of frequency of group discrimination. Only measures of ethnic-based engagement are directly comparable to measures in EMBES, which makes them focal outcomes in this study. Because SCIP dataset does not have direct measure of identification, I used opinion about reconcilability of cultural values

[14]This situation is equivalent to the lack of statistical power in experimental studies due to a small sample or a small number of treated participants in the overall sample.

allows to proxy for identification (see Tables 76 to 78 in the Appendix). SCIP data measures only voting in elections in the country of origin, since the surveyed population most commonly does not have voting rights in their respective host country. SCIP dataset does not contain measures of political efficacy, satisfaction with democracy and opinion about duty to vote, therefore equivalents of simplified models from the original research were estimated in this study.[15] The survey also did not cover country of birth in comparable manner (since no respondent was born in the UK or the Netherlands) and party identification with parties in the UK (or the Netherlands). These variables also had to be omitted from this Study. Hypotheses 1 and 2 emulate hypotheses 3 and 4 from the original research, while hypotheses 3 and 4 are created to fit the proxy variables for identification:

1. On average, exposure to societal discrimination enhances in-group attachment and engagement.

2. On average, exposure to political discrimination increases enhances in-group attachment and engagement.

3. On average, exposure to societal discrimination increases the probability of thinking that in-group and host-country values are irreconcilable.

4. On average, exposure to political discrimination increases the probability of thinking that in-group and host-country values are irreconcilable.

[15]Due to differences in available variables, I estimated adapted models for ethnic-based in engagement and identity choice using EMBES data, but only with variables that have their equivalent in the SCIP dataset. Adapted models are additionally shrunk compared to Oskooii's simplified models. Adapted models retain directionality and statistical significance (Tables 64 and 65, Appendix)

Analysis

Results of the original paper, including all graphs and tables present in the paper can be reproduced using the code available from Harvard Dataverse page of the paper.[16] Additional statistical tests are conducted to check reliability of original models. Main checks tackle linearity of the relationship between main predictors (societal and political discrimination) and outcome variables and the impact of significant outliers in each model. Plots of partial residuals for original models indicate a linear relationship between main predictors and all outcomes (Graph 2 in the Appendix). Difference in fits plots indicate that significant outliers only exist when estimating models for identity choice as British (Graph 3 in the Appendix). Breusch-Pagan test indicates that almost all models estimated are heteroscedastic (Table 2 in the Appendix). Replicated models do not address nor correct for this feature of original models. Additional checks include correlation test for two main predictors - societal and political discrimination - which indicate that two variables are not significantly correlated (=.42, Graph 1 in the Appendix). I assume lack of stronger correlation stems from different originating points of two types of discrimination, in day-to-day social interactions for societal and in policies and behaviour of state officials for political discrimination (Oskooii 2020).

Study 1

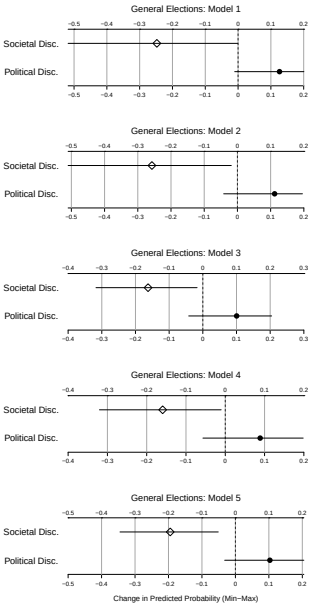
In the case of mainstream political engagement, results suggests that exposure to societal discrimination demonstrates robustness when modelled with a different set of controls, keeping both the directionality and statistical significance for voting in general elections

[16]The replication material with code is available from the following link.

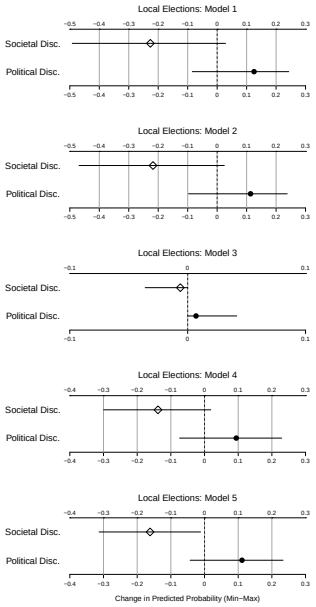
(Table 5, Appendix). On the other hand, effects of political discrimination lack statistical significance, but retain hypothesised directionality. Results are presented as plotted predicted probabilities (first difference method), as in the original paper (Figure 2). Comparison of average marginal effects indicate that only Models 1, 2 and 5 estimate .030 to .040 larger effects of societal discrimination compared to the original paper, whereas models 3 and 4 (with economic controls) estimate around .010 smaller effect. (Table 6, Appendix). This suggests that more informative control matrix in models 1 and 2, as well as controlling for belief in spread of prejudice and community involvement might inflate the effects of societal discrimination. The effect of societal and political discrimination on voting in local elections is not robust to changes control matrix (Table 7, Appendix).

In the case of in-group attachment, measured as ethnic-based engagement, only three models were estimated, leaving out models that include variables about evaluations of personal and national economic circumstances. Literature does not suggest these variables are important controls of in-group attachment (Healy, Persson, and Snowberg 2017; Hansford and Gomez 2015; Lewis-Beck, Nadeau, and Elias 2008; Wlezien, Franklin, and Twiggs 1997). The effects of societal discrimination are robust to new specifications and both their statistical significance and positive direction are replicated (Figure 3a). In terms of the effect magnitude, replicated models 1 and 2 estimate effects that are circa 0.06 bigger than in the original models (compare Tables 10 and 3, Appendix). On the other hand model 3 estimates 0.015 smaller effect compared to the original paper. Based on this evidence, more informative set of controls in models 1 and 2 contributes to minor

Figure 2: Mainstream Political Engagement: Predicted Probabilities for Specific Measures



(a) Vote in General Elections



(b) Vote in Local Elections

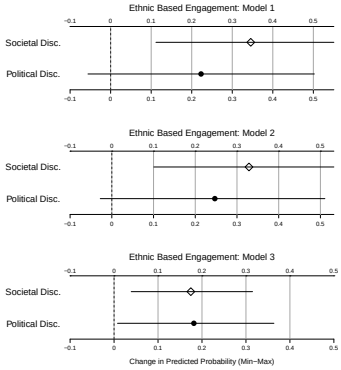
inflation of the effects of societal discrimination. Effects of political discrimination are not statistically significant, although the effect is still positive in the observed data.

The effect of societal discrimination on choosing both in-group and British identity is replicated as negative and statistically significant (see Figure 3b below and Table 11, Appendix). The effect of political discrimination is statistically significant only in model 3 for preferring Black/Asian identity over British (lower panel, Figure 3b), while all other coefficients are not statistically significant. This suggests that effects of political discrimination on identity choice cannot be consistently replicated. Average marginal effects[17] are bigger than effects estimated for original models for category *both* for political and societal discrimination alike, on the other hand the magnitude of the effects of political and societal discrimination for category *British* is closer to that of the original models (Tables 4 and 12). Results suggest that new control matrix inflates the effect of both political and societal discrimination. These results need to be taken with reserve considering that estimation of average marginal effects rests on logit models, which diverge from original multinomial models.

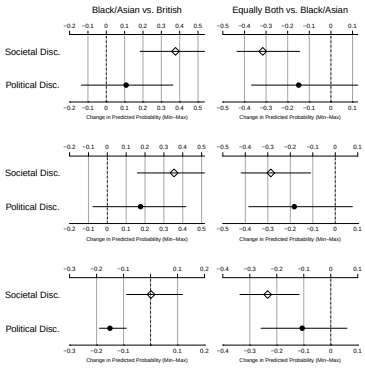
Considering hypotheses from the original paper, none of them can be consistently supported with models from Study 1. Hypothesis 1 completely lacks support, while hypothesis 2 has only partial support with societal discrimination demonstrating robust

[17] A word of precaution is necessary here, namely estimation of average marginal effects for multinomial models is done by estimating two logit models for two categories of multinomial models. This way of estimating average marginal effects changes the baseline category, which in multinomial models was set as ethnic identity. On the other hand, logit models for category *both* baseline was by forcing British and ethnic categories to 0, while for category *British* baseline includes forcing ethnic and both category to 0. The same procedure was applied to estimating average marginal effects of models from the original paper.

Figure 3: In-group Attachment: Predicted Probabilities for Specific Measures



(a) Ethnic-Based Engagement



(b) Identity Choice

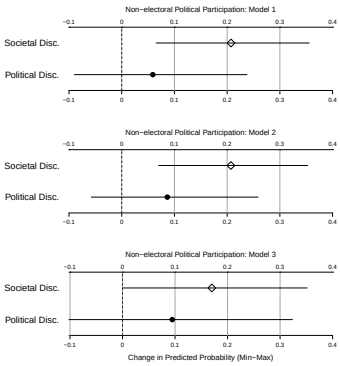
negative association with voting in general elections. In the same manner, hypothesis 4 cannot be supported, while there is some support for hypothesis 3, considering statistically significant, positive association of exposure to societal discrimination with ethnic based engagement and consistent negative association with acceptance of both British and in-group identity.

Study 2

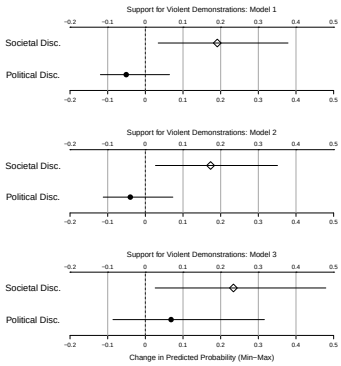
Study 2 tests the association of political and societal discrimination with outcomes other then mainstream political participation and in-group attachment. Instead focus is put on non-electoral political participation as an example of more costly political participation, and support for violent demonstrations as somewhat less mainstream, but still relevant form of political participation. In modelling the effects of political and societal discrimination I used both fully specified and simplified modelling strategies

from the original paper. Because not all control from the original models seemed relevant, I estimated additional models that excluded worship attendance and attitudes about voting as duty from a fully specified model and introduced measures for participation in social networks, attitudes about national economic future and the use of Internet. Complete models are presented in the Appendix (Tables 21 and 23), while plots with predicted probabilities are supplied below.

Figure 4: Predicted Probabilities for Alternative Outcomes



(a) Support for Violent Demonstrations: Political and Societal Discrimination



(b) Non-electoral Political Participation: Political and Societal Discrimination

Models in Study 2 indicate that only hypothesis 4 can be consistently supported throughout different specifications of the model. Results indicate that only societal discrimination is positive and statistically significant predictor of support for violent protests. Average marginal effects indicate that additional controlling inflates the effect of societal discrimination (Table 22, Appendix). On the other hand, effects of political discrimination are statistically insignificant and smaller compared to the effects of societal discrimination. This rendered hypothesis 3 unsupported.

Furthermore, hypothesis 2 cannot be consistently supported, because model 3 (Table 23, Appendix) renders insignificant coefficient for societal discrimination, also visible on Figure 4b where confidence interval includes 0 point. Because coefficients for political discrimination are not statistically significant, hypothesis 1 also does not have sufficient level of support (Figure 4a). Comparing average marginal effects for non-electoral participation, societal discrimination on average produces stronger effects than political discrimination. Comparing between models, average marginal effects of societal discrimination on support for violent demonstrations are bigger than in the case of non-electoral participation (Tables 22 and 24, Appendix).

Study 3

Study 3 brings in different theoretical estimand and narrows down the target population to discriminated minority individuals. Because of these differences, the results will not be directly comparable to the original research. Nevertheless the aim of these models is to test for causal effects of societal and political discrimination as stand-alone treatments of exposure to discrimination (not taking into account its intensity). Building on the original paper, a set of distinct hypotheses was developed to be tested in Study 3. Balance checks, simplified models and results presented as odds-ratios, as well as results for coerced exact matching are available in the Appendix.

Average treatment effect on the treated for societal and political discrimination on voting in general elections is given provided in Table 1 and Table 2. Based on combined results,

political discrimination demonstrates consistently positive and statistically significant impact on voting on general elections. This renders strong support for hypothesis 2. On the other hand, societal discrimination demonstrated no statistically significant impact on the outcome, rendering hypothesis 1 unsupported. The effect of political discrimination in Table 2 is directed as theoretical mechanism in the original paper predicts.

Table 1: Vote in General Elections (Societal Discrimination): ATT Estimates as Risk Ratios - Complete Model

Model	Estimate	P-value	CI Lower	CI Upper
Full Probit	0.964	0.420	0.882	1.054
Full Logit	0.944	0.208	0.863	1.033
Nearest Probit	1.002	0.973	0.909	1.104
Nearest Logit	0.977	0.625	0.890	1.072
Optimal Probit	0.985	0.764	0.893	1.087
Optimal Pobit	0.954	0.304	0.871	1.044

Note: 95% confidence intervals reported

Table 2: Vote in General Elections (Political Discrimination): ATT Estimates as Risk Ratios - Complete Model

Model	Estimate	P-value	CI Lower	CI Upper
Full Probit	1.098	0.047	1.001	1.204
Full Logit	1.109	0.039	1.005	1.223
Nearest Probit	1.165	0.002	1.058	1.284
Nearest Logit	1.148	0.008	1.037	1.272
Optimal Probit	1.176	0.002	1.060	1.305
Optimal Pobit	1.164	0.003	1.052	1.287

Note: 95% confidence intervals reported

Voting in local elections follows the similar pattern as voting in general elections (see Table 3 and Table 4). Results in Table 4 indicate that political discrimination represents consistently positive and statistically significant predictor of voting on local elections. This renders strong support for hypothesis 4, whereas, hypothesis 3 remains unsupported. Results in Table 2 demonstrate positive directionality, as the original paper

suggests. This result is somewhat surprising (considering all the differences between models), because the original effect is not robust to the introduction of different control matrix.

Because matching imitates experimental logic with survey data (Ho et al. 2007; Stuart 2010), these results suggest that exposure to political discrimination has a causal impact on mainstream political participation. Results therefore suggest that exposure to state-incurred discrimination pushes minority individuals to cast a ballot, on the other hand, average treatment effect on the treated indicates that among those who experienced societal discrimination, there is a critical number of those who voted despite exposure. Therefore, exposure to societal discrimination on its own does not cause retraction from mainstream political participation.

Table 3: Vote in Local Elections (Societal Discrimination): ATT Estimates as Risk Ratios - Complete Model

Model	Estimate	P-value	CI Lower	CI Upper
Full Probit	0.864	0.001	0.792	0.943
Full Logit	0.873	0.004	0.796	0.958
Nearest Probit	0.922	0.159	0.823	1.032
Nearest Logit	0.989	0.855	0.873	1.119
Optimal Probit	0.988	0.848	0.875	1.116
Optimal Pobit	0.952	0.362	0.855	1.059

Note: 95% confidence intervals reported

Results presented in Table 5 and Table 6 lend support for hypotheses 5 and 6. Both types of discrimination represent positive and statistically significant predictors of ethnic-based engagement[18]. Risk ratios suggest that exposure to societal or political discrimination among exposed individuals increases probability of getting involved

[18]Results were not significant only with nearest logit procedure.

Table 4: Vote in Local Elections (Political Discrimination): ATT Estimates as Risk Ratios - Complete Model

Model	Estimate	P-value	CI Lower	CI Upper
Full Probit	1.116	0.033	1.009	1.235
Full Logit	1.121	0.021	1.018	1.235
Nearest Probit	1.204	0.001	1.078	1.344
Nearest Logit	1.154	0.009	1.036	1.286
Optimal Probit	1.200	0.001	1.076	1.338
Optimal Pobit	1.222	0.001	1.089	1.372

Note: 95% confidence intervals reported

in ethnic organisations between 1.2 and 1.3 times, compared to non-discriminated individuals. As suggested in the original paper supported by social identity theory (Tajfel and Turner 2010, 2004; Oskooii 2020), matching analysis confirms that exposure to either societal or political discrimination can be regarded as cause of ethnic-based engagement. Considering differences between Studies 3 and 1, compared to the original paper, the impact of societal discrimination on ethnic-based engagement remains robust through different models.

Table 5: Ethnic-based engagement (Societal Discrimination): ATT Estimates as Risk Ratios - Complete Model

Model	Estimate	P-value	CI Lower	CI Upper
Full Probit	1.295	0.003	1.094	1.531
Full Logit	1.352	0.002	1.119	1.633
Nearest Probit	1.244	0.024	1.029	1.503
Nearest Logit	1.203	0.061	0.992	1.458
Optimal Probit	1.247	0.015	1.043	1.490
Optimal Pobit	1.219	0.032	1.018	1.461

Note: 95% confidence intervals reported

Study 4

In Study 4, a set of 4 adapted hypotheses is tested on the population of recently arrived immigrants. Societal discrimination variables in the UK and the Netherlands do not

Table 6: Ethnic-based engagement (Political Discrimination): ATT Estimates as Risk Ratios - Complete Model

Model	Estimate	P-value	CI Lower	CI Upper
Full Probit	1.217	0.036	1.013	1.462
Full Logit	1.200	0.048	1.002	1.438
Nearest Probit	1.226	0.048	1.002	1.500
Nearest Logit	1.169	0.107	0.967	1.412
Optimal Probit	1.244	0.037	1.013	1.528
Optimal Pobit	1.209	0.057	0.994	1.470

Note: 95% confidence intervals reported

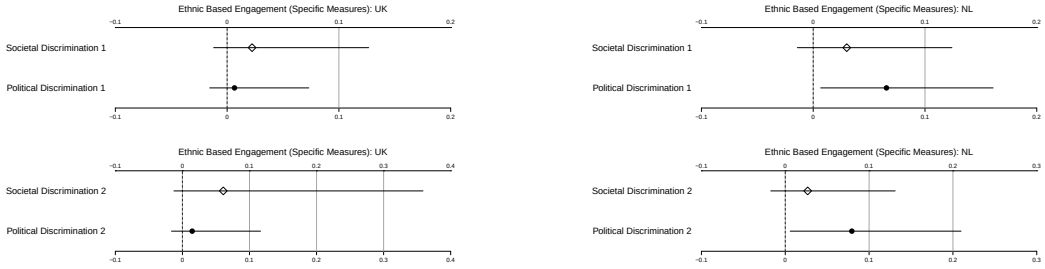
render statistically significant coefficients (Figure 5).[19] Therefore, hypothesis 1 lacks sufficient support. On the other hand, hypothesis 2 has partial support, considering that coefficients for political discrimination from the Dutch data are positive and statistically significant. Contrary to expectations from hypothesis 2, coefficients for political discrimination from the UK data are statistically insignificant, but also negative (Table 74, Appendix). Such difference in results might stem from differences between datasets. The UK dataset has only 2 ethnic groups, while the Dutch sample has in total 6 surveyed groups. The Dutch sample is also bigger than the UK sample for circa 1000 respondents. It is noteworthy that coefficients of predicted probabilities for the UK sample are positive, which is in accordance with hypothesis 2.

Last set of models provides only partial support for hypothesis 3, but not for hypothesis 4. Again, coefficients obtained from the UK sample lack any statistical significance and will not be interpreted (Figure 6 below and Table 76, Appendix), while, coefficients obtained from the Dutch sample are statistically significant (Table 78, Appendix). Hypothesis 3 is strongly supported with coefficients statistically significant and positive, as proposed in the hypothesis.[20] On the other hand, hypothesis 4 lacks support, with coefficients

[19] expl

[20] It is noteworthy that coefficients the impact of societal discrimination on agreement with the statement

Figure 5: Ethnic-based Engagement (Specific Measures)



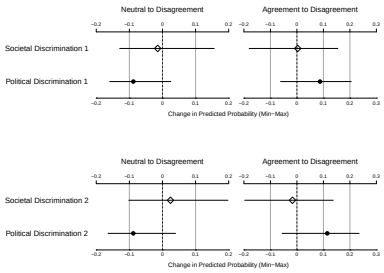
(a) UK **(b)** NL

being statistically significant, but negative (Figure 6[21] and Table 78, Appendix). Such coefficients indicate that contrary to hypothesis 4, increase in exposure to political discrimination is associated with decreasing agreement with irreconcilability of values. Within the Dutch sample, overview of average marginal effects indicate that the effect of societal discrimination is circa twice the size compared to the effect of political discrimination.

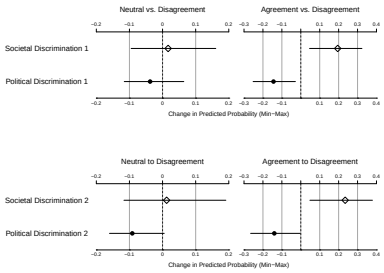
is also positive in directionality in the UK data, but not statistically significant (Table 76, Appendix).

[21]Even though it seems that upper point of confidence interval for Political Discrimination 2 for agreement relative to disagreement with irreconcilability of values touches the 0 point, it does not, because the upper end of the confidence interval lies at −0.003041571 obtained using `mnl_fd2_ova` function in `MNLpred` in R

Figure 6: Irreconcilable values (Specific Measures)



(a) UK



(b) NL

Discussion and Conclusion

This replication study is intended to expand tests of theoretical mechanism of divergent impact of societal and political discrimination on political behaviour of minorities, proposed in Oskooii (2020, 2016) through robustness checks and extensions of the original study. Due to differences in theoretical and empirical estimands, as well as differences in data used, studies in this replication are comparable to the original research in different extent.

Study 1 finds that only societal discrimination remains robust negative predictor of voting in general elections and identifying both as British and Black/Asian, and robust positive predictor of ethnic-based engagement. Such results indicate limited support for Oskooii's mechanism overall (2020). Results suggest two types of discrimination might not be of same significance to minorities. By magnitude and consistency of the effect, societal discrimination steps forward as more significant form of discrimination. As a potential explanation, I would propose that the importance of formalisation of

anti-discrimination plays a certain role (see i.e. Hemker and Rink 2017). Namely, political institutions are equipped with anti-discrimination mechanisms which can identify and punish perpetrators. Whereas, the societal discrimination is by nature more dispersed and harder to pin-point, even though mechanisms for reporting and investigating exist. Punishing the perpetrators seems more elusive than in the case of political discrimination.

Study 2 finds that only societal, but not political, discrimination consistently predicts support for violent protests. This finding goes along with some key conclusions of the recent literature about support for protests among immigrants and support for violence (Grewal and Hamid 2024; Bilodeau et al. 2023). Oskooii's (2020) theory suggests that unsystematic nature of societal discrimination makes individuals feel isolated and solitary in their coping with discrimination. Support for violent protests could act as a way to reclaim agency through supporting (or participating in) in these protests and through approval of violence (possibly directed towards perpetrators of discrimination). Supporting violence in this case becomes a channel for expression of grievances. Supporting violent protests could also be a way to recognise and connect with other people who're experiencing discrimination or expressing their grievances. Forming such sort of bond could diminish the sense of isolation that societal discrimination triggers.

Study 3 finds that exposure to political discrimination consistently and positively impacts voting in general and local elections, and participation in ethnic-based engagement, while societal discrimination positively impacts ethnic-based engagement. Treatment

in Study 3 is mere exposure to societal and political discrimination and the effect narrows down to just (societally or politically) discriminated individuals. Findings support Oskooii's (2020) theoretical mechanism that exposure to political discrimination inspires political engagement, while both types of discrimination inspire participation in ethnic organisations. Mere exposure to societal discrimination does not cause abstinence from voting. An explanation for such result might be in the fact that voting is relatively anonymous and low cost form of political participation (societally discriminated individuals do not necessarily have to enter the public space to vote, i.e. if they vote by post). Secondly, voting as an act can bring internal satisfaction and demonstrate abidance to following norms of the local community. Both of these can be interpreted as ways of strengthening one's self-esteem and neutralising harmful effects of societal discrimination. Additionally, the literature also suggests that withdrawal is also related to avoidance of situations in which the loss of self-esteem might emerges (Armenta and Hunt 2009; Greene, Way, and Pahl 2006; Schmitt et al. 2014), which, in fact is not a situation of voting.

Study 4 brings only partial support for positive association of political discrimination with ethnic based engagement and positive support of societal discrimination with irreconcilable values between host country citizens and immigrants. Study 4 suggests narrow similarity between minorities and freshly arrived immigrants. Differences between the Dutch and the UK samples points out that quality of the comparison might be dependent more on the diversity and size of the sample and less on the same temporal and political context of the data collection. Findings suggests that both types

of discrimination have significance for immigrants. Political discrimination as suggested pushes immigrants to search for protection of their ethnic in-group, while societal discrimination alienates them from host country nationals through increased perception of cultural distance. Both of these findings lend limited support to Oskooii's (2020) theoretical mechanism.

Studies presented demonstrate that testing Oskooii's theoretical mechanism is not an easy task. Differences in estimands, populations and methodology prevent direct comparisons between studies. Nevertheless, they all address the same theoretical mechanism, which provides common ground for their mutual evaluation. Study 2 suggests that mechanism described in Oskooii (2020), cannot be directly applied to all other forms of political behaviour. I suggest voting as low-cost form of political participation is not easily exchangeable for other forms of mainstream political participation. Studies 1 and 3 indicate that relationship between voting and different types of discrimination is not as strong and as straightforward as proposed in the initial argument (Oskooii 2020). Study 3 provides a very solid evidence about the robust positive impact of political and societal discrimination on ethnic-based engagement, further supporting Oskooii's (2020) theoretical mechanism. Finally, Study 4 underlines additional limitations to Oskooii's (2020) mechanism, which is not straightforwardly applicable to populations other then minorities with history of living in their host country.

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