COVID-19 associated discrimination in Germany: Realistic and symbolic threats[1,2]

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Abstract

The contribution focusses on Covid-19 associated discrimination (CAD) in Germany and asks whether immigrants from Asian origin are increasingly discriminated against during the COVID-19 pandemic and whether other immigrant groups face similar threats. Using data from the COVID-19 add-on-survey for CILS4EU-DE (CILS4COVID), we demonstrate that immigrants from Asian origin report an increasing CAD during the pandemic, which is more pronounced for respondents residing in administrative districts with a more dynamic COVID-19 situation. Similar results can be found for respondents originating from both American continents and from countries of the former Soviet Union. Given that COVID-19 was first reported in Asia, but with rather low number of infections later on, and the rather high infection rates on both American continents and in Russia, we conclude that CAD experienced by these groups might happen in a reaction to both realistic and symbolic threats posed by the virus.

Motivation

The novel coronavirus COVID-19 has not only brought the most severe challenge to the global economy, stability and social order since the World War II, the instances of ethnic and racial discrimination have considerably increased in many countries (Ng 2020; He et al. 2020; Pew Research Center 2020). Discrimination toward people who share social or

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behavioural characteristics with COVID-19 patients but themselves may not carry the novel virus has received a special term ‘COVID-19 associated discrimination’ (CAD) (Liu et al. 2020). Individuals of Chinese or Asian descent have primarily—but not solely—become the targets of CAD, hate crimes, stigmatization and labelling as spreaders of disease (Coates 2020; Devakumar et al. 2020; Chung & Li, 2020; Liu et al. 2020; Pew Research Center 2020; Tessler et al. 2020).

Since the outbreak in early 2020, numerous news outlets around the world have reported cases of discrimination against Asians (He et al. 2020; Timberg and Chiu 2020; Kelly 2020; Kandil 2020). Social media analyses demonstrate a surge in the use of offensive language in social media captured by a number of tweets exclusively mentioning ‘Chinese virus’ or ‘China virus’ instead of coronavirus or COVID-19 (Budhwani and Sun 2020 for US) or any Sinophobe speech on Twitter (Stechemesser et al. 2020 for English-language tweets globally). Also in Germany, particularly in the beginning of the pandemic, media—including social media—have been extensively reporting about the increase in discrimination and instances of harassment among individuals of Asian descent (Klaus 2020; Hoff 2020).

Notwithstanding existing media reports, we still lack reliable empirical evidence regarding the extent of discrimination related to COVID-19 pandemic among ethnic and racial minorities in Germany based on representative data. Therefore, the first objective of the current study is descriptive. We pursue a question whether Asian minorities in Germany report an increase in discrimination since the outbreak of the COVID-19 pandemic. We further explore to what extent other ethnic minorities are also affected by CAD. The second objective is more analytical. We seek to explore to what extent possible discriminatory tendencies towards Asians and potentially other minorities originating in countries with high

COVID-19 penetration can be explained by the extent of threat COVID-19 poses to individuals' health.

Migration and ethnic divisions in Germany

Reviewing major migration inflows to Germany, one would find little mentioning of mass migration from the far East. The guest worker migration in the 1950–1970s to west Germany and subsequent family reunification encompassed immigration from the Mediterranean countries, mainly, Southern Europe (Italy, Spain and Greece), Turkey as well as former Yugoslavia. A similar guest worker scheme with Northern Vietnam, albeit on a smaller scale, was adopted by the eastern German socialist regime to enable Vietnamese migrants to come and work in the GDR.

Refugee migration came predominantly from the communist Eastern Europe to west Germany (particularly until the late 1980s), Yugoslavia (in the early 1990s) and Turkey, as well as more recently from the Middle Eastern countries, predominantly Syria, Afghanistan and eastern Africa (OECD 2017). Refugees' migration from Asian countries happened primarily from southern Vietnam in the 1970-1980s, when Vietnamese boat and quota refugees found safe haven in west Germany.

Other more recent waves of migration originate largely in Europe and encompass free movements within the European Union, primarily from East to West (Van Mol and de Valk 2016). The return migration of ethnic German diaspora mainly from Poland and the former Soviet Union (Kogan 2011) is yet another within-European migration phenomenon, specific to Germany.

Notwithstanding the distinct case of the Vietnamese migration to western and eastern parts of Germany, there has been a steady but numerically minor migration of individuals with Asian descent—primarily from Vietnam, China, Thailand, South Korea, Japan and the Philippines—to Germany beginning from the 19th century (Gütinger 2004). More recently these inflows come in form of labour, student and marriage migration.

As in many Western immigrant-receiving countries, in Germany minorities originating in East Asia are integrated exceptionally well in a structural dimension. They belong to the best performing migrant groups within the German education system (Kemper 2015: 85) and are among the least discriminated groups in the German labour market (Koopmans et al. 2018). Results of the recent field experiment demonstrate that German employers do not discriminate against Western and Southern European and East Asian immigrants (ibid: 22), whereas other origin groups, particularly Turkish-origin individuals (Kaas and Manger 2012; Schneider et al. 2014), experience considerable disadvantages.

COVID-19 threat and CAD

This study builds upon the integrated or intergroup threat theory (ITT), widely used in psychology and sociology to causally link (perceived) threat and between-group prejudices (Stephan and Stephan 2000; Stephan et al. 2009). ITT is applicable to the case of any ethnic or social group that may feel threatened, regardless of whether those threats actually exist or are just perceived. An example would be majority ethnic group's perception of economic threat from ethnic minorities, who are believed to take over jobs and supress wages, even though in reality such effects might not even exist. Just a perception of economic or any other, e.g., security, threat might increase prejudice against the outgroup.

In the theory update, Stephan and Renfro (2002) pointed to the importance of two key types of threat: realistic and symbolic. The *realistic* threat is defined as an existential danger to the ingroup in terms of physical safety, health, well-being or economic situation (see also Campbell's [1965] realistic conflict theory). *Symbolic* threats arise when the lifestyle, values and norms of an outgroup differ from those of the ingroup and therefore pose a threat to the latter. The basic idea is that values, norms, beliefs, attitudes and lifestyles are manifestations of one's identity, which is likely to be threatened by socially and culturally distant outgroups.

The threat posed by COVID-19 is, on the one hand, a realistic threat of global importance, likely to translate into the prejudice against outgroups, which are particularly associated with the spread of the virus (e.g., because these groups originate in countries with high levels of COVID-19 penetration). On the other hand, COVID-19 threat might be a symbolic threat, if it pertains to ethnic groups with distinctively different life styles, habits, and norms, believed to be somehow related to COVID-19. Following Tessler et al's (2020) discussion, we argue, that in eyes of the ingroup, individuals originating in China might pose both realistic (due to the high number of COVID-19 cases particularly in the beginning of the pandemic) and symbolic threat (due to e.g. exotic traditions and eating habits).

Therefore, and similarly to the situation in other countries, we expect Asian minorities in Germany to report particularly high rates of CAD (Hypothesis 1). We further expect higher rates of CAD to be reported by ethnic minorities in areas in which threat of COVID-19 is more substantial (Hypothesis 2).

Data and Methods

The empirical analyses draw on data from the German part of the Children of Immigrant Longitudinal Survey in Four European Countries (CILS4EU-DE; Kalter et al. 2019a; Kalter et al. 2019b). More precisely, we rely on data that was collected during the COVID-19 add-on survey (CILS4COVID) which was conducted almost parallel to the eighth wave of the CILS4EU-DE survey, starting on April 22, 2020. CILS4EU-DE is a German long-term project succeeding the international CILS4EU-survey, which was conducted between 2010 and 2014 in Germany, England, the Netherlands and Sweden. CILS4EU's main aim was to study the integration of 14-15-year-old students with and without an immigrant background in the respective societies. From 2014 onwards, CILS4EU-DE continues to track the lives of CILS4EU's original respondents plus, starting from 2016 (wave 6), an additional refreshment sample (for more information, see Kalter et al. 2019b).

The target population of CILS4COVID are participants of the CILS4EU-DE study who took part in wave 7 or temporarily dropped out in wave 7 but participated in wave 6. The study focusses on young adults born between 1994 and 1996 and aged approximately between 24 to 26 during the field work of the CILS4COVID survey. In total, 5,254 persons were invited to participate in a web- or a postal survey. Overall, 3,472 participated in CILS4COVID as of July 27 (response rate 66 per cent). Due to item non-response, we will consider 3,016 cases in the analyses. Given that the aim of CILS4EU-DE is to study integration processes among respondents with and without an immigrant background, CILS4EU-DE oversampled respondents with an immigrant background during the original sampling process in 2010 as well as during the sample selection of the refreshment (for more information, see CILS4EU

2016; Kalter et al. 2019b; Schiel et al. 2016).[3] This will be considered by applying design weights to the descriptive as well as to the multivariate analyses.

Shortly after the beginning of the data collection for the eighth wave of the CILS4EU-DE data in March 2020, the COVID-19 pandemic massively hit Germany, which led to the decision to investigate how respondents are doing during the pandemic, what their worries are, what information they rely upon, etc. and inquiring about economic, social as well as emotional consequences of the pandemic. Another key focus of CILS4COVID was on self-reported discrimination among immigrants. More precisely, we ask the following question: 'Since the beginning of the Corona-pandemic, do you feel increasingly discriminated against or treated unfairly due to your ethnic background?' The answer categories are 'yes', 'rather yes', 'rather no', 'no' and 'I feel never discriminated against'. The variable is constructed in such a way, that the last category filters out respondents who never feel discriminated. The first four categories therefore correspond only to those respondents who actually feel discriminated against and for whom the extent of CAD is meaningful to determine.[4]

Since the dependent variable contains a substantial number of respondents who report to be never discriminated against (see Figure 1 below), exclusion of those individuals might introduce bias into the estimations. To address this possible selection bias, we ran the Heckman's sample selection correction, which involves simultaneously estimating the selection and outcome/response equations. Since the main outcome variable is measured on an ordinal scale, we estimated an ordered probit model with Heckman selection (command: heckoprobit in Stata 16.0).

[3] For our analyses, respondents are defined as having an immigrant background if at least one grandparent is foreign born.

[4] For the analyses, the values of the four categories are reversed, i.e. higher values indicate an increase in CAD.

The following variables are included into the selection equation: the highest ISEI-score in the family (of the respondent's father and mother), the highest educational degree of respondents, gender ('female'; 'male'), whether they have a partner ('yes' or 'no'), whether they have children ('yes' or 'no') and information about respondents' current socio-economic situation ('school/studying'; apprenticeship; 'full-time or part-time work'; 'unemployed'; 'something else').

Further we control for the origin of individuals. Due to limitations in the number of cases for specific immigrant groups, we decided to group the sample into broader regional categories, whenever this was necessary. In the following, we differentiate between respondents without an immigrant background ('Germany'; n=1,696), between respondents originating from Turkey (n=277), from countries from the Former Soviet Union ('FSU'; n=163), from Poland (n=181), from countries from the former Yugoslav Republic ('FYR'; n=82), from Eastern European countries (n=120), from other European countries (n=232), from Northern as well as Southern America ('Americas'; n=56), from Asia (n=70), from the Middle East and Africa ('ME/Africa'; n=139).

Respondents' origin is a key variable also in the outcome equation, as we seek to investigate whether some groups are especially affected by CAD. Given that the number of COVID-19 infections increased massively during the pandemic, we also consider the epidemiological week the respondent was surveyed. To investigate whether respondents resided in an area where the risk of an infection was particularly high, we also merged information about the average number of new COVID-19 cases during the last seven days per 100,000 inhabitants of the administrative district. Given that this variable is heavily skewed to the left, we used

the natural logarithm of these values.[5] The information on the infection numbers is provided on a daily basis by the Robert Koch Institute (RKI).[6] RKI is a governmental scientific institution in the field of biomedicine and the leading actor in the combat of the Corona pandemic in Germany.

Results

Figure 1 provides some descriptive insights into the question whether immigrant groups in Germany differ in their level of self-reported discrimination in general and during the Corona pandemic in particular. For the more general account, on the left-hand side of the figure we observe pronounced differences between the immigrant groups in Germany. While respondents originating from Turkey, Africa, the Middle East or Asia report rather pronounced discrimination in their everyday life, others, like respondents with a Polish origin or from both American continents, report rather low levels of discrimination.

When focusing on the right-hand side of the figure, it becomes evident that especially one group reports a pronounced increase in discriminatory behaviour against its members during the COVID-19 pandemic and these are respondents of Asian origin. More than half of these respondents report instances of CAD. This finding is particularly interesting when comparing it to those groups which tend to otherwise report discrimination and which are identified as the most discriminated groups in Koopmans et al's (2018) field experiment. Only about 10 per cent of respondents from Turkey, Africa or the Middle East report instances of CAD.

Figure 1: Perception of CAD by countries of origin

[5] We added 1 to all figures before the logarithm to avoid the undefined logarithm of zero as the average number of new COVID-19 cases during the last seven days was zero in some districts.
[6] Access via https://npgeo-corona-npgeo-de.hub.arcgis.com/datasets/917fc37.a709542548cc3be077a786c17_0

- Figure 1 about here –

As outlined above, in order not to introduce bias by excluding those respondents who admit that they have never experienced discrimination, in the multivariate analysis we estimate a probit model with Heckman selection. We further investigate whether the CAD is more pronounced when respondents reside in administrative districts with rather high infection rates, i.e. where the risk of being infected is comparably high and the threat imposed by COVID-19 is rather realistic. Model 1 in Table 1 displays the results of the initial model, where only the country of origin and the epidemiological week (results not shown) is included in the outcome equation. In the selection equation, we consider the highest parental ISEI (HISEI) in the family, respondents' educational background, their current situation and gender. Focussing first on the selection equation, it becomes evident that, other things being equal, respondents who originate in Turkey, Middle East, Africa and Asia report discrimination, much like it has already been seen in Figure 1. However, also respondents from the FSU and from 'other European country' report slightly higher rates of discrimination in general. Regarding other covariates, respondents from families with a higher ISEI-score report lower levels of discrimination. The same holds also true for respondents with an upper secondary degree (as compared to those with a lower secondary degree). Finally, unemployed respondents also report slightly higher rates of discrimination as compared to those working full-time or part time.

- Table 1 about here –

When looking at the outcome question, we observe pronounced differences between individuals of Asian descent and the German majority. Furthermore, also respondents from

the FYR and both American continents report an increase in discrimination during the COVID-19 pandemic, although on a considerably lower level.[7]

In model 2, we introduce the (natural logarithm) seven day-average of new cases in the administrative district per 100,000 inhabitants. The coefficient is not statistically significant, which suggests that residing in an area with high level of COVID-19 penetration is not necessarily related to an increased CAD. Including this variable does not alter the results presented in model 1.

In model 3, we interact the variable pertaining to the seven day-average of new cases in the administrative district per 100,000 inhabitants with the country of origin variable to examine whether the relationship between the potential threat of getting infected and CAD is origin-group specific. This interaction effect is statistically significant and positive for Asians, respondents from the FSU and Americas, meaning that an increase in the number of new COVID-19 cases in the administrative district is associated with an increase in reported CAD among these groups. To visualize this interaction effect, we display predicted probabilities for the category 4 of the dependent variable, i.e. the answer 'yes' to the question whether respondents report increased discrimination during the COVID-19 pandemic at different levels of the natural logarithm of the average number of new cases during the last seven days in the administrative district per 100,000 inhabitants. In order to keep the figure concise, we only display the 95 per cent confidence interval for the interaction effect pertaining to respondents of Asian origin. The three curves with a significant interaction effect are depicted in black, while all non-significant interactions are displayed in grey. As can be seen, with an increasing number of new COVID-19 cases in an administrative district, the probability for

[7] Note that the difference between respondents of Asian descent and respondents from FYR is statistically significant ($p<0.01$), while the difference between respondents of Asian descent and respondents from Americas is only marginally significant ($p=0.096$).

respondents with Asian roots, as well as respondents from the FSU and Americas, reporting an increased discrimination during COVID-19 pandemic increases considerably.

Figure 2: Predicted probabilities for outcome 4 ('yes') resulting from the interaction effect in model 3

- Figure 2 about here -

However, how can we explain that interaction effects are statistically significant only for these three groups, but not for other young people, for example those with Turkish or Polish heritage? Figure 3 plots the development of the country-specific COVID-19 cases for selected origin groups and—for the sake of reference—for Germany as a whole. We also mark the start of the CILS4COVID study on the time axis. Based on the ITT we suggest that both realistic and symbolic threats associated with the COVID-19 infection can explain the increase in discrimination among some but not other groups.

As can be seen from Figure 3, the virus was prevalent in China (and some other Asian countries) rather early but was quickly and effectively contained. From March onwards, the number of COVID-19 cases rose tremendously in other parts of the world, surpassing the official numbers reported in China and later on also in Germany rather rapidly in absolute terms. This pertains to countries such as the US and starting from May 2020 also Russia. Despite the spread of the virus, some other countries, e.g., Turkey and Poland have similar or less pronounced dynamics (in absolute terms) of COVID-19 cases as Germany. Information on the COVID-19 pandemic on the country level is easily accessible across the globe and persistently communicated in the Germany media. Therefore, prejudices against respondents originating from Americas or the former Soviet Union may be related to the realistic threat of being infected by COVID-19, whereas respondents with Polish and Turkish roots would not

be perceived as of any particular threat, at least if compared to the rest of the German population.

Figure 3: Development of absolute, cumulated numbers of COVID-19 cases in selected countries

- Figure 3 about here -

CAD reported by Chinese and Asian immigrants in the beginning of the pandemic may have been attributed to the perception of realistic threat of a COVID-19 contamination. But since the absolute numbers of COVID-19 infections in China and in other Asian countries have stagnated since early on, but the CAD did not disappear, the discriminatory behaviour against respondents with an Asian background might no longer be attributed solely to the realistic but rather to the symbolic threat.

Summary and conclusions

Using information from the add-on study CILS4COVID implemented in the course of the CILS4EU-DE project, we have demonstrated that COVID-19 associated discrimination is also an issue in Germany. Like in several other countries, individuals of Asian descent seem to be particularly affected by CAD. Furthermore, we have shown that the level of self-reported discrimination depends—for some immigrant groups—strongly on the dynamics of COVID-19 situation in the respondents' residential area. Respondents with a (Northern or Southern) American background, from the FSU and from Asian countries are more likely to report CAD when the number of infections in the administrative district where they reside increases. Given that the countries these individuals are believed to originate from have been affected by COVID-19 (a) considerably stronger than Germany (in terms of the number of COVID-19 cases) or (b) rather early in the pandemic, we conclude that CAD experienced by

these groups might happen in a reaction to both realistic and symbolic threats posed by the virus.

Given the rather low number of cases for several immigrant groups and the skewed distribution for most groups on the outcome variable, our results have to be taken with caution. It has to be noted that the significant interaction effects for immigrants from FSU and Americas may be driven by some few influential cases, while the interaction effect for Asians is the most robust one. It can further be reported that sensitivity analyses with OLS regression (and Heckman selection) confirm all three interaction effects for individuals from the FSU, Americas and Asia. Still, the robustness of our findings needs to be confirmed with larger immigrant samples, other age groups and other countries.

References

Budhwani H. & Sun, R. (2020). Creating COVID-19 stigma by referencing the novel coronavirus as the "Chinese virus" on Twitter: quantitative analysis of social media data. *Journal of Medical Internet Research*, 22(5). https://doi.org/10.2196/19301

Campbell, D. T. (1965). Ethnocentric and other altruistic motives. In D. Levine (Ed.) *Nebraska Symposium on Motivation* (pp. 283-311). Lincoln, NE: University of Nebraska Press.

Chung, R. Y.-N. & Li, M. M. (2020). Anti-Chinese sentiment during the 2019-nCoV outbreak. *The Lancet*, 395(10225), 686–687. https://doi.org/10.1016/S0140-6736(20)30358-5

CILS4EU. (2016). Children of Immigrants Longitudinal Survey in Four European Countries. Technical Report. Wave 1 – 2010/2011, v1.2.0. Mannheim: Mannheim University.

Coates, M. (2020). Covid-19 and the rise of racism. *The British Medical Journal*, 369. https://doi.org/10.1136/bmj.m1384.

Devakumar, D., Shannon, G., Bhopal, S. S., & Abubakar, I. (2020). Racism and discrimination in COVID-19 responses. *The Lancet*, 395(10231), 1194. https://doi.org/10.1016/S0140-6736(20)30792-3

Gütinger, E. (2004). *Die Geschichte Der Chinesen in Deutschland: Ein Überblick über die ersten 100 Jahre ab 1822*. Münster: Waxmann Verlag.

He, J., He, L., Zhou, W., Nie, X., & He, M. (2020). Discrimination and Social Exclusion in the Outbreak of COVID-19. *International Journal of Environmental Research and Public Health*, *17*(8), 2933.

Hoff, S. (2020). Mehr Anfeindungen gegen asiatische Community registriert. Rbb24. https://www.rbb24.de/politik/thema/2020/coronavirus/beitraege_neu/2020/04/deutschland-

berlin-brandenburg-coronavirus-corona-covid-19-asien-community.html. Accessed July 27, 2020.

Kaas, L. & Manger, C. (2012). Ethnic Discrimination in Germany's Labour Market: A Field Experiment. *German Economic Review* 13(1), 1–20. https://doi.org/10.1111/j.1468-0475.2011.00538.x

Kalter, F., Kogan, I., & Dollmann, J. (2019a). Children of Immigrants Longitudinal Survey in Four European Countries – Germany (CILS4EU-DE) – Full version. Data file for on-site use. GESIS Data Archive, Cologne, ZA6655 Data file Version 4.0.0, doi:10.4232/cils4eu-de.6655.4.0.0.

Kalter, F., Kogan, I., & Dollmann, J. (2019b). Studying Integration from Adolescence to Early Adulthood: Design, Content, and Research Potential of the CILS4EU-DE Data. *European Sociological Review*, 35, 280–297.

Kandil, C. Y. (2020). Asian Americans report over 650 racist acts over last week, new data says. NBC News. March 26, 2020. https://www.nbcnews.com/news/asianamerica/ asian-americans-report-nearly-500-racist-acts-over-last-week-n1169821. Accessed July 27, 2020.

Kelly, L. (2020). Trump, GOP 'dog whistle' over coronavirus inflames anti-Chinese rhetoric online: analysis. The Hill. March 18, 2020. https://thehill.com/policy/technology/488236-trump-gop-dog-whistle-on-coronavirus-inflames-anti-chinese-rhetoric-online. Accessed July 27, 2020.

Kemper, T. (2015). Bildungsdisparitäten von Schülern nach Staatsangehörigkeit und Migrationshintergrund. Eine schulformspezifische Analyse anhand von Daten der amtlichen Schulstatistik. Münster: Waxmann.

Klaus, J. (2020). Corona und Rassismus - 100 Übergriffe: Die Sündenböcke der Pandemie. ZDF heute. https://www.zdf.de/nachrichten/politik/coronavirus-diskriminierung-rassismus-asiaten-100.html; Accessed July 27, 2020.

Kogan, I. (2011). New Immigrants – Old Disadvantage Patterns? Labour Market Integration of Recent Immigrants into Germany. *International Migration* 49(1), 91–117.

Koopmans, R., Veit, S., & Yemane, R. (2018). Ethnische Hierarchien in der Bewerberauswahl: Ein Feldexperiment zu den Ursachen von Arbeitsmarktdiskriminierung *WZB Discussion Paper* SP VI 2018-104. Wissenschaftszentrum Berlin für Sozialforschung. https://doi.org/10.4269/ajtmh.20-0285

Liu, Y., Finch, B., Brenneke, S. G., Thomas, K., & Le, P.T.D. (2020). Perceived Discrimination and Mental Distress Amid the COVID-19 Pandemic: Evidence From the Understanding America Study, *American Journal of Preventive Medicine*. https://doi.org/10.1016/j.amepre.2020.06.007

Ng, E. (2020). The Pandemic of Hate Is Giving COVID-19 a Helping Hand. *The American Journal of Tropical Medicine and Hygiene*. 102(6), 1158–1159. https://doi.org/10.4269/ajtmh.20-0285

OECD. 2017. Finding their way. Labour market integration of refugees in Germany. Available from http://www.oecd.org/germany/Finding-their-Way-Germany.pdf. Accessed July 27, 2020.

Pew Research Center. (2020). Many Black and Asian Americans Say They Have Experienced Discrimination Amid the COVID-19 Outbreak. https://www.pewsocialtrends.org/2020/07/01/many-black-and-asian-americans-say-they-have-experienced-discrimination-amid-the-covid-19-outbreak/ Accessed July 27, 2020.

Schiel, S., Sandbrink, K., Aust, F., Chudziak, N., & Kleudgen, M. (2016). Methodenbericht. CILS4EU-Projekt: CAPI-Befragung von jungen Erwachsenen in Deutschland. Bonn: infas Institut für angewandte Sozialwissenschaft GmbH.

Schneider, J., Yemane, R., & Weinmann, M. (2014). Diskriminierung am Ausbildungsmarkt. Ausmaß, Ursachen und Handlungsperspektiven. Berlin: Sachverständigenrat Deutscher Stiftungen für Integration und Migration.

Stechemesser, A., Wenz, L., & Levermann, A. (2020). Corona crisis fuels racially profiled hate in social media networks. *EClinicalMedicine*. https://doi.org/10.1016/j.eclinm.2020.100372.

Stephan, W. G. & Renfro, C. L. (2002). The role of threat in intergroup relations. In D. M. Mackie & E. R. Smith (Eds.) *From prejudice to intergroup emotions: Differentiated reactions to social groups* (pp. 191–207). New York: Psychology Press.

Stephan, W. G. & Stephan, C. W. (2000). An integrated threat theory of prejudice. In S. Oskamp (Ed.) *Reducing Prejudice and Discrimination* (pp. 23–45). Mahwah, N.J.: Lawrence Erlbaum Associates.

Stephan, W. G., Ybarra, O., & Morrison, K. R. (2009). Intergroup Threat Theory. In T. D. Nelson (Ed.) *Handbook of Prejudice, Stereotyping, and Discrimination* (pp. 43–59). Psychology Press.

Tessler, H., Choi, M., & Kao, G. (2020). The Anxiety of Being Asian American: Hate Crimes and Negative Biases During the COVID-19 Pandemic. *American Journal of Criminal Justice*; 45, 636–646. https://doi.org/10.1007/s12103-020-09541-5

Timberg, C. & Chiu, A. (2020). As the coronavirus spreads, so does online racism targeting Asians, new research shows. Washington Post. April 8, 2020. https://www.washingtonpost.com/technology/2020/04/08/coronavirus-spreads-so-does-online-racism-targeting-asians-new-research-shows/. Accessed July 27, 2020

Van Mol, C. & de Valk, H. (2016). Migration and Immigrants in Europe: A Historical and Demographic Perspective. In B. Garcés-Mascareñas & R. Penninx (Eds.) *Integration Processes and Policies in Europe. Contexts, Levels and Actors* (pp 31–55). Springer Open.

Figures

Figure 1: Perception of CAD by countries of origin

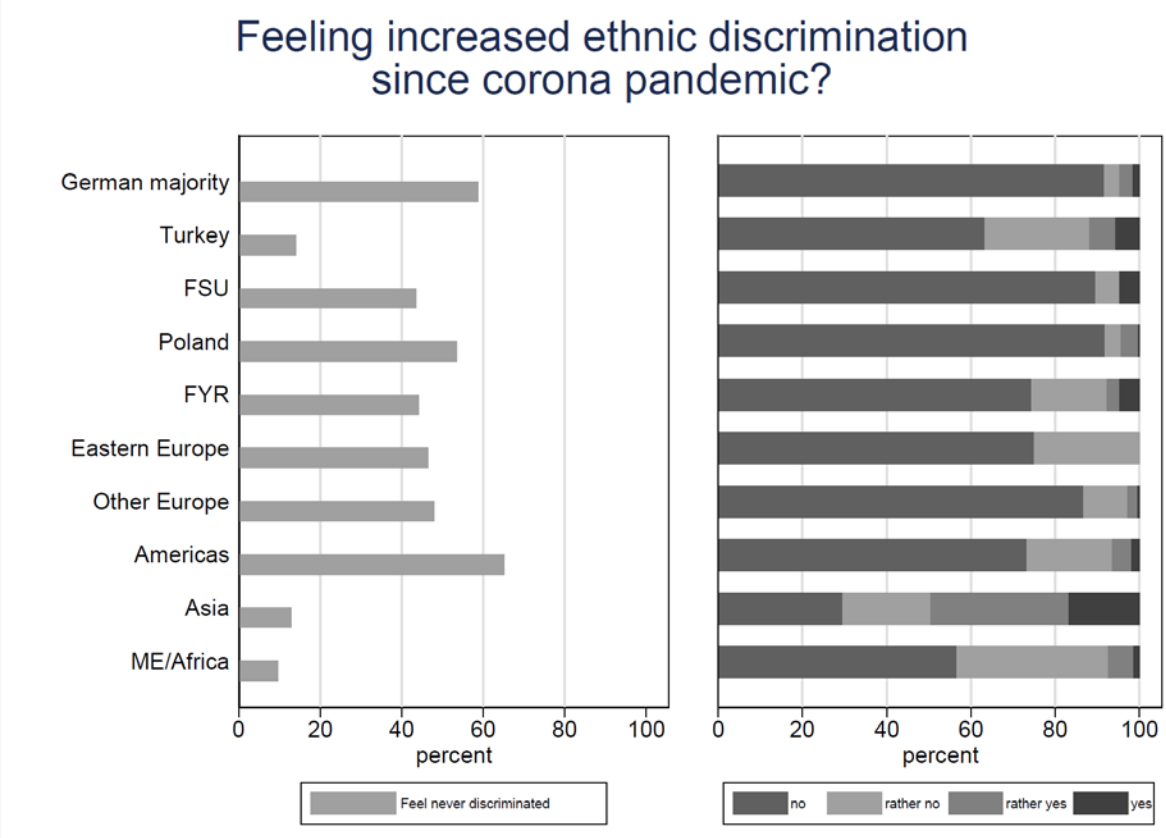


Figure 2: Predicted probabilities for outcome 4 (‘yes’) resulting from the interaction effect in model 3

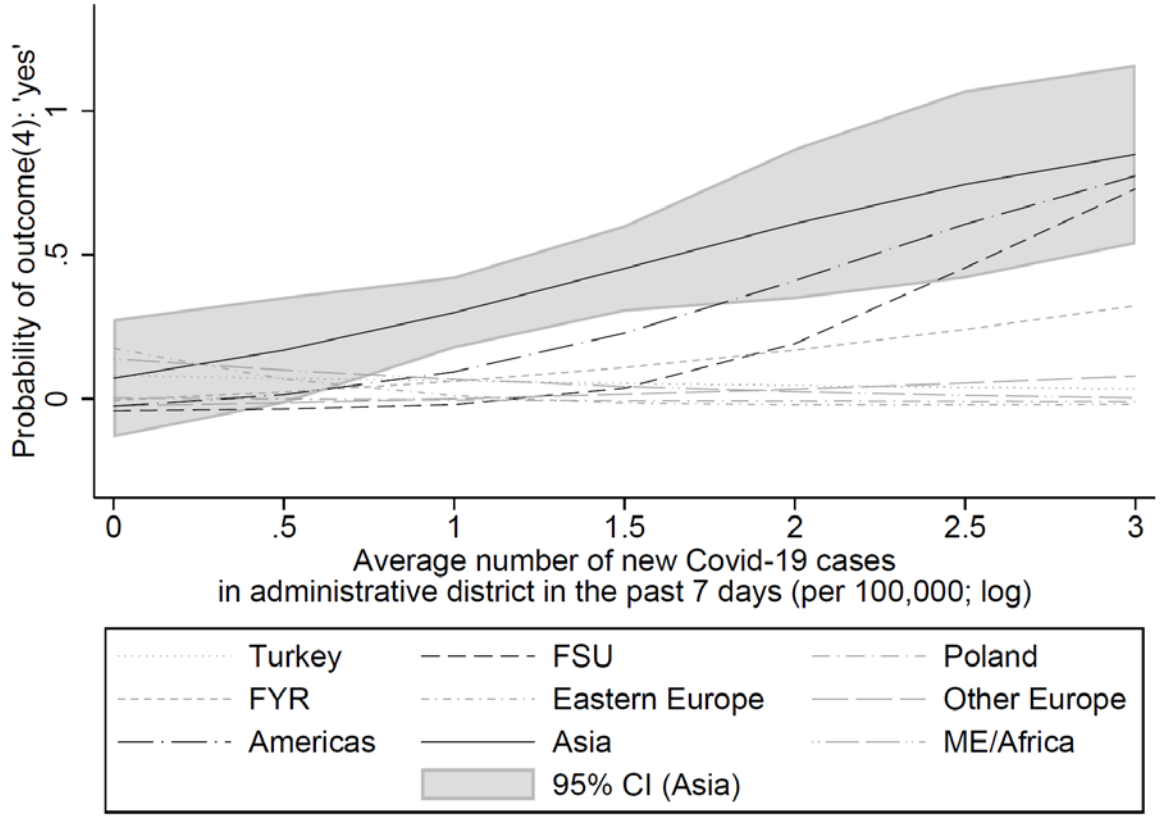
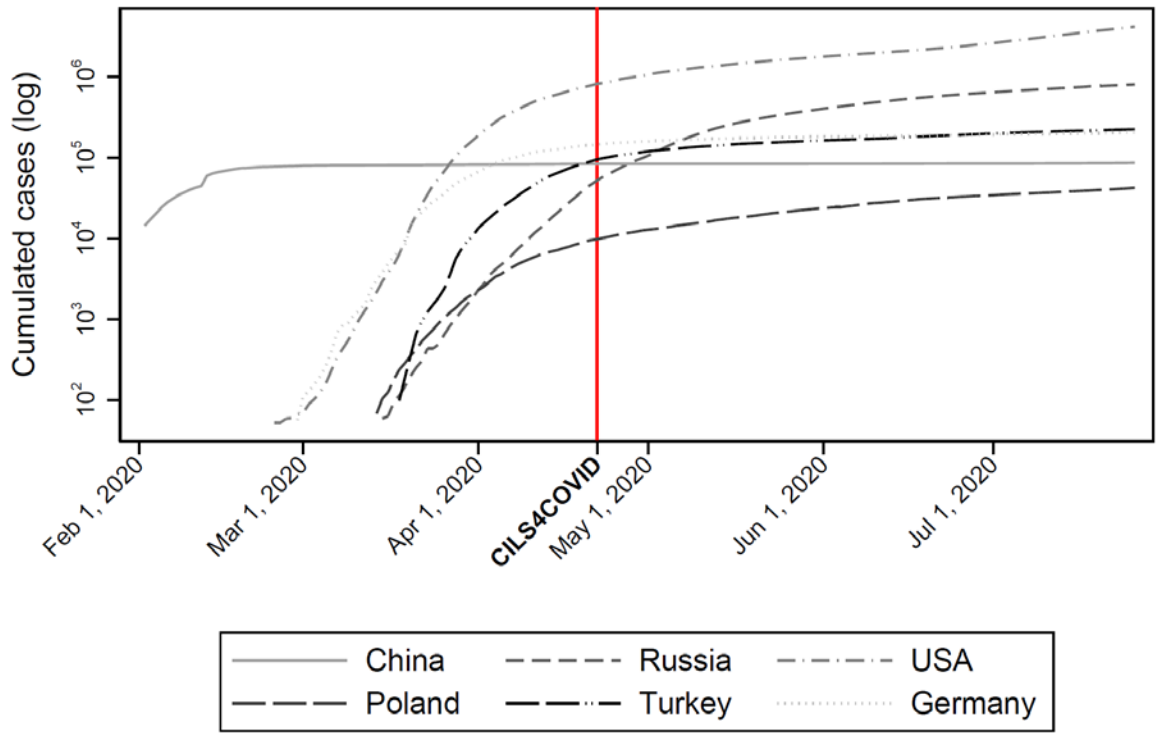


Figure 3: Development of absolute, cumulated numbers of COVID-19 cases in selected countries



Source: EU Open Data Portal;
https://data.europa.eu/euodp/en/data/dataset/covid-19-coronavirus-data
Note: Country-specific number of cases reported when n > 50

Tables

Table 1: Results of probit models with Heckman correction (unstandardized coefficients and robust standard errors in parentheses)

	Model 1		Model 2	Model 3
	Selection	Outcome	Outcome	Outcome
Country of origin (Ref.: Germany)				
Turkey	1.05***	0.48	0.49	0.57
	(0.18)	(0.31)	(0.30)	(0.47)
FSU	0.39**	0.01	0.01	-1.99**
	(0.15)	(0.28)	(0.27)	(0.67)
Poland	0.11	-0.08	-0.08	0.04
	(0.14)	(0.25)	(0.25)	(0.59)
FYR	0.20	0.49+	0.49+	-0.05
	(0.24)	(0.28)	(0.28)	(0.51)
Eastern Europe	0.23	0.28	0.28	0.96+
	(0.19)	(0.36)	(0.36)	(0.51)
Other Europe	0.26+	0.04	0.04	-0.39
	(0.13)	(0.21)	(0.20)	(0.41)
Americas	-0.27	0.60+	0.60+	-0.40
	(0.27)	(0.34)	(0.34)	(0.59)
Asia	1.35***	1.31**	1.31**	0.53
	(0.26)	(0.42)	(0.41)	(0.70)
ME/Afr.	1.49***	0.49	0.50	0.83
	(0.16)	(0.35)	(0.34)	(0.55)
Adm. district no. ['Adn'] (new cases/100k, 7-day-av. (log))			-0.02	-0.12
			(0.11)	(0.17)
Interactions				
Turkey x Adn				-0.03
				(0.27)
FSU x Adn				1.59**
				(0.49)
Poland x Adn				-0.09
				(0.46)
FYR x Adn				0.59
				(0.42)
Eastern Europe x Adn				-0.83
				(0.55)
Other Europe x Adn				0.40
				(0.30)
Americas x Adn				1.11*
				(0.48)
Asia x Adn				0.91*
				(0.44)
ME/Afr. x Adn				-0.25
				-0.03
HISEI	-0.01***			
	(0.00)			
Current situation (Ref.: full-/part-time work)				
School/studying	0.08			
	(0.09)			
apprenticeship	0.05			
	(0.12)			
unemployed/nothing	0.36+			
	(0.19)			
something else	0.32			
	(0.23)			

Gender (Ref.: Female)	-0.07			
Male	(0.07)			
Educational degree (Ref. lower secondary				
Intermediate secondary	-0.06			
	(0.19)			
Upper secondary	-0.45*			
	(0.18)			
Cut point 1		0.81*	0.79+	0.75
		(0.35)	(0.41)	(0.47)
Cut point 2		1.37**	1.35**	1.33*
		(0.42)	(0.47)	(0.53)
Cut point 3		1.83***	1.80***	1.82**
		(0.47)	(0.52)	(0.58)
athrho		-0.58*	-0.57*	-0.53+
		(0.28)	(0.27)	(0.27)
Intercept	0.42*			
	(0.20)			
Log pseudolikelihood	-2505.92		-2505.88	-2488.92
N	3,016	1,453	1,453	1,453

Source: CILS4EU, CILS4EU-DE and CILS4COVID.
Note: Epidemiological week included in the outcome equation in all models, results not shown.
Sign.: + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
Model 1: Wald test of independent equations (rho = 0): chi2(1) = 4.47; Prob > chi2 = 0.035.
Model 2: Wald test of independent equations (rho = 0): chi2(1) = 4.60; Prob > chi2 = 0.032.
Model 2: Wald test of independent equations (rho = 0): chi2(1) = 3.89; Prob > chi2 = 0.049.