



Social Capital Trends in Germany in the Face of the Covid-19 Pandemic: A Research Note

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This research note reports social capital trends in Germany during the COVID-19 pandemic. It is based on a comparison of survey data from 2017/18 and 2020/21, i.e., trends reported here inform about changes of social capital levels during the “second lockdown” of the pandemic, when containment policies were in effect throughout the country. Findings point to stable levels of in-group trust, out-group trust and prosocial attitudes. At the same time, sociability orientations are lower and society is generally perceived as less solidary. Members in voluntary organizations have more social capital compared to non-members—this difference is found before as well as during the pandemic. Regarding that changes are generally small, it can be concluded that the pandemic did neither strengthen social capital considerably, nor did it lead to a massive overall decline of social capital.

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INTRODUCTION

Much scholarly work has addressed social capital (Bourdieu 1986; Coleman 1990; Lin et al., 2001). Conceptualized as a collective good, social capital refers to the level of trust and solidarity as well as norms of reciprocity and cooperation in social groups and societies (Putnam 1993, 2000). Previous research has shown that social capital is associated with a large variety of positive outcomes in communities, regions and countries, including the performance of political institutions (Paxton 2002; Putnam 1993), public health and happiness levels (Ehsan et al., 2019), or economic productivity (Knack and Keefer 1997; Whiteley 2000).

In the COVID-19 pandemic, scholars have pointed to the crucial role of social capital to contain the spread of the virus: In the US, individuals living in counties with high levels of social capital reduced their mobility faster in the beginning of the pandemic (Borgonovi and Andrieu 2020), had lower rates of COVID-19 infections (Makridis and Wu 2021) and fewer excess deaths in later stages of the pandemic (Fraser et al., 2021). Data from China’s Hubei province suggest that social capital facilitates the public acceptance of and compliance with control measures (Wu 2021). A recent analysis from Japan shows that some aspects of social capital, for instance, more pronounced norms of reciprocity in a Japanese province, are associated with fewer COVID-19 related deaths (Murayama et al., 2021). In European countries, regions with higher social capital also had lower incidence rates and lower rates of COVID-19 related deaths (Bartscher et al., 2020).

Less clear is the impact of the COVID-19 pandemic on social capital itself. Previous literature on social crises and natural disasters suggest that social capital often increases when societies are faced with an external threat (e.g., Meyer, 2018; Hawkins and Maurer 2010). After the 2010 earthquake in Chile, provinces with higher damage rates showed higher levels of trust (Dussallant and Guzmán

2014). Cross-country analyses indicate that societal trust increased from 1990 to 2010 in those countries, which had to cope with natural disasters (Toya and Skidmore 2014). Aldrich and Meyer (2015) argue that in case of a disaster, existing social networks are able to generate mutual support, which in turn strengthens the social ties of the network. Using earthquakes in Latin American countries as an example, Carlin et al. (2014) can show that the state's capacity to provide security and basic services for the people affected is crucial for social capital to grow during a mass emergency. When states fail at this task, natural disasters can develop into social disasters. In a comprehensive study of natural hazards (e.g., floods, storms, earthquakes) in China, Lee (2021) similarly concludes that disasters often generate solidarity and social bonds, but may reduce political trust into government authorities, when crisis management is poor. In line with this reasoning, a couple of studies found that generalized trust increased slightly in the early phase of the COVID-19 pandemic in a variety of countries, including Germany (Esaiaasson et al., 2021; Kühne et al., 2020; Kye and Hwang 2020; Stanzani 2020), but data from later stages of the pandemic are still missing.

Social capital concepts usually include various aspects, like trust, norms, and solidarity, making it a rather fuzzy concept with plenty of meanings. In addition, social capital can have a radius of varying size or breadth. For instance, Putnam (2000) distinguishes “bridging social capital” that is spanning over various social groups, thereby bridging societal cleavages and “bonding social capital,” typical for close-knit groups of like-minded individuals. Delhey et al. (2011) differentiate between “in-group trust” towards family and friends and “out-group trust” towards unknown individuals with different national and ethnic origins. Hence, different indicators of social capital may be affected differently by the pandemic. Survey data from Chinese youths, collected in the COVID-19 pandemic, show that the pandemic often led to an increase in trust levels towards family members, but a decrease in social contacts outside of the family as well as a declining participation in community activities (Yu et al., 2021). Data from Germany indicate a decline of trust in institutions (e.g., government, health authorities) in the course of the pandemic (COSMO, 2021), but rather stable levels of social cohesion in society (Bertelsmann-Stiftung, 2020). However, some of the most vulnerable groups like single parents, low income households, and people with physical impairments or chronic illness perceived social cohesion to be comparatively weak during the pandemic (Bertelsmann-Stiftung, 2020).

According to Putnam (1993, 2000) and other scholars representing a “neo-Tocquevillian approach” (van der Meer and van Ingen 2009), a vital civil society with manifold local associations and clubs is the backbone of social capital production. This claim rests on the argument that many clubs facilitate informal socializing across various social groups, thereby bridging social cleavages and creating the breeding ground for mutual understanding, generalized trust and reciprocity norms. In various studies prior to the COVID-19 pandemic, it was shown that social capital levels, i.e., social trust, solidarity, prosocial norms etc., are higher among active club

members compared to non-members (Burrmann et al., 2019, 2020; Coffé and Geys 2007; Stolle 1998; van der Meer and van Ingen 2009; Wollebæk and Strømsnes 2008). However, the COVID-19 pandemic may have affected the mechanisms of social capital production in civic associations. Many of these associations have reduced their offers and activities during the pandemic, refrained from in-person meetings and face-to-face social interactions. For instance, clubs in the domain of leisure (e.g., sports clubs, choirs) were closed in Germany in two months-long lockdowns (March to May 2020; November 2020–April 2021), resulting in decreased participation and membership losses (Thieme and Wallrodt 2021).

Against the background of this reasoning, the present study puts two research questions (RQ) to the core, both referring to the relationship of the COVID-19 pandemic with the social capital level of society. Using survey data from Germany, the study asks: *How have social capital levels developed in late 2020, i.e. in a later stage of the pandemic (RQ 1)?* In view of the multi-layered conceptualizations of social capital, this article examines several different indicators of social capital, including sociability orientations, prosocial attitudes, in-group trust, out-group trust, and perceived trust within society. Using different indicators may inform about the robustness or—in case of inconsistent findings—variations in social capital trends during the pandemic. Transferring findings of previous disaster research to the pandemic situation, it must be assumed that social capital levels are higher compared to the time before COVID-19. However, we also assume that in-group trust (towards family, neighbors and friends) may have increased in the pandemic, but for out-group trust and trust in society, i.e. trust with a wider social radius, this effect is supposedly less pronounced.

In addition, the second main question of the paper reads: *Is an active membership in voluntary organizations in the pandemic situation (still) significantly associated with higher social capital levels (RQ 2)?* In line with Putnam (1993, 2000) and others, we assume that active membership in civic associations is a predictor of a higher social capital level, but this effect may have weakened in the pandemic situation when many civic associations reduced their activities. Although somewhat exploratory in essence, this second question addresses the possibility that one of the key social capital-producing processes has become less effective over the course of the pandemic.

MATERIALS AND METHODS

To answer the research questions stated above, we analyze large-scale, representative survey data, collected in 2017/2018, i.e., before the pandemic, and in late 2020, i.e., in the middle of the second lockdown in Germany. Both survey waves are part of the project “*Organized sport and social capital—revisited*” [OSSKAR] and represent nation-wide online surveys accomplished in cooperation with Kantar Public, a leading public opinion institute in Germany.

The surveys used a similar methodology, including sampling procedures, fieldwork, and questionnaire design. The respondents for each survey wave were recruited within the

TABLE 1 | Sample description.

	Wave I (2017/18)			Wave II (2020/21)		
	N	Unweighted%	Weighted%	N	Unweighted%	Weighted%
<i>Gender</i>						
male	1.277	50	49	1.548	48	49
female	1.291	50	51	1.695	52	51
diverse	---	---	---	4	0.1	0.1
<i>Age</i>						
18–40 years	933	36	33	992	31	32
>40 years	1.635	64	67	2.255	69	68
<i>Education</i>						
Lower/medium	1.648	64	68	2.139	66	65
Secondary Abitur	920	36	32	1.108	34	35
<i>Residency</i>						
East-Germany	498	19	20	638	20	20
West-Germany	2.070	81	80	2.609	80	80
<i>Membership</i>						
yes	1.050	41	41	1.385	43	44
no	1.518	59	59	1.862	57	56

framework of Kantar Public's online access panel (Lightspeed GMI), consisting of 233,000 individuals. Both samples represent the adult population living in Germany (>18 years) with access to the Internet and match the composition of the German adult population according to age, gender, educational level and residency (East and West Germany). However, minor corrections were made using inverse probability weighting to adjust the socio-demographic composition to official population data (see **Table 1**). The weighted data allow for comparisons over time at the population level.

The data for the first wave was collected from December 13, 2017 to January 3, 2018 (Wave I, N = 2,568). The data for the second wave was collected from December 14, 2020 to January 6, 2021 (Wave II, N = 3,247). Since the COVID-19 pandemic represented by far the most drastic change in the period under consideration, which affected the entire population, the changes between both waves are likely to be caused by the pandemic. However, this is a very probable, but not an absolutely compelling interpretation, of course.

The following indicators for social capital were collected in both surveys:

Social trust. Social trust is probably the most popular measure of social capital. We asked for in-group and out-group trust using an item battery developed by Delhey et al., 2011. The measure distinguishes between in-group trust, i.e., social trust with a small radius, and out-group trust, i.e., trust with a wider radius. We measure in-group trust with three items: "I'd like to ask you how much you trust people from various groups. Could you tell me whether you trust people from this group completely, somewhat, not very much or not at all?" (a) "your family"; (b) "your neighborhood"; and (c) "people you know personally". Another three items measure out-group trust, i.e., the trust towards: (a) "people you meet for the first time"; (b) "people of another religion"; (c) "people of another nationality".

Cronbach's alpha is 0.57 for in-group trust and 0.81 for out-group trust.

Membership trust. An additional item was added to the measure of social trust that referred to membership trust, i.e., the trust directed towards other members of civic associations. This item was only included in case the respondent reported at least one membership. Hence, all members of a voluntary association rated how much they trust "other members of their association". Membership trust is conceptualized as between "in-group"- and "out-group"-trust and is thus analyzed separately.

Perceived trust in society. In addition, we were also interested in respondents' perceptions of trust in present society. This scale was based on three items: (a) "If you look closely, you will find much helpfulness in society," (b) "In fact, most people do not care about what happens to their fellow human beings" (inverted) and (c) "Relationships among people are becoming increasingly impersonal" (inverted). The scale is adapted from a previous survey (Baur and Braun 2003). Respondents answered all trust-related items on a 4-point Likert scale (1 = "trust not at all" to 4 = "totally trust"). Cronbach's-alpha is 0.62.

Sociability orientations. Socializing and regular face-to-face interactions are often considered a source of social capital. We use a 6-item scale that refers to a person's perceptions of her network of friends and acquaintances (e.g., "My friends are like a big family"; "I do a lot together with my friends and acquaintances") to measure sociability orientations. The scale is adapted from previous surveys (Vester et al., 2001). Respondents indicated their approval on a 4-point rating scale (1 = "not agree at all" to 4 = "totally agree"). Cronbach's-alpha is 0.81.

Prosocial outlook. A prosocial orientation towards helpfulness and solidarity is another key aspect of social capital. The 4-item scale for prosocial outlook refers to general attitudes of solidarity, helpfulness and altruism (e.g., "I like to help other people

TABLE 2 | Predictors of social capital indicators.

Predictors	In-group trust		Out-group trust		Trust in members [#]	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>
Time	0.007	-	-0.032	-	0.025	-
Membership	0.072	***	0.152	***	---	-
Time x Membership	-0.016		-0.033	-	---	-
Education	0.038	**	0.187	***	0.070	**
Income	0.114	***	0.063	***	0.055	*
Migration status	-0.066	***	0.034	-	0.068	-
Children <13	0.009	-	-0.019	-	-0.026	-
Residence	-0.046	**	0.062	**	-0.109	***
Gender	0.002	-	0.026	-	0.152	***
Age	0.006	***	0.003	***	0.003	**
Religious affiliation	0.081	***	0.082	***	0.026	-
<i>R</i> ²	0.079	-	0.062	-	0.026	-

OLS, regressions with weighted data. Unstandardized coefficients. Significance: ****p* < 0.001, ***p* < 0.01, **p* < 0.05, +*p* < 0.10. Significance estimated with robust standard errors. #Only answered by members.

whenever I am able to do so”; “I am prepared to speak up for the interest of others, even if it is inconvenient for me”). The scale is adapted from previous surveys (Vester et al., 2001). Answer categories range from 1 = “not agree at all” to 4 = “totally agree”. Cronbach’s-alpha is 0.67.

Memberships in voluntary organizations. A membership variable is included in the analyses. In the survey, respondents indicated their memberships in 14 civic associations (e.g., sports clubs, music clubs, hobby associations, unions, political parties, professional associations, volunteer fire brigades, rescue services or ecological activist groups). The membership variable distinguishes between those individuals who are member in at least one association vs those who are non-members.

Socio-demographic variables. We included age (in years), gender (0 = female vs 1 = male), level of education (0 = low and medium secondary degree vs 1 = higher secondary degree/“Abitur”), place of residence (0 = East-Germany vs 1 = West-Germany), migration status, i.e., respondents who themselves and/or whose parents were not born in Germany (0 = no migration status vs 1 = migration status), net household income <2,500 € (0 = <2,500€ vs 1 = ≥2,500€), children <13 years living in the household (0 = no vs 1 = yes), and religious affiliation (0 = no vs 1 = yes) into the analysis.

In order to test the assumptions on the extent to which time (wave I vs wave II) and membership in voluntary organizations predict social capital, regression models are calculated with the weighted samples. We include time × membership interactions to assess whether or not the association between club memberships and social capital has changed over the course of the pandemic. We calculate the regression model for each social capital indicator separately to be able to reveal differences between different outcome variables. Sociodemographic variables are controlled in each model. Beforehand, all preconditions for the application of regression models were checked including multicollinearity analyses. The values for the tolerance (TOL) and variance inflation factors (VIF) remain below the critical values of TOL >0.25 and VIF <4 (Urban and Mayerl 2018). The

TABLE 3 | Predictors of social capital indicators.

Predictors	Sociability		Prosocial outlook		Trust in society	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>B</i>	<i>p</i>
Time	-0.099	***	0.002	-	-0.050	*
Membership	0.199	***	0.082	***	0.099	***
Time x Membership	-0.032	-	0.025	-	-0.046	+
Education	0.027	-	-0.015	-	0.138	***
Income	0.105	***	0.041	**	0.053	-
Migration status	-0.009	-	0.023	-	0.010	-
Children <13	0.048	*	-0.023	-	-0.005	-
Residence	-0.089	***	-0.059	***	0.009	-
Gender	-0.005	-	-0.118	***	0.003	-
Age	0.000	-	0.003	***	0.001	-
Religious affiliation	0.054	**	0.089	***	0.072	***
<i>R</i> ²	0.055	-	0.042	-	0.041	-

OLS, regressions with weighted data. Unstandardized coefficients. Significance: ****p* < 0.001, ***p* < 0.01, **p* < 0.05, +*p* < 0.10. Significance estimated with robust standard errors.

parameter estimates are made with robust standard errors (HC3, Hayes and Cai 2007).

RESULTS

The main effects for the time variable in the regression models show a significant result for two out of six social capital indicators. In the course of the COVID-19 pandemic in 2020/21, respondents indicated a significantly lower sociability level and lower level of trust perceived in society compared to 2017/18. However, both effect sizes are very small (Table 2, 3). Measured against the baseline values, sociability orientations are by 2.4% lower and trust in society scores by 2.2%. We find no significant differences between 2017/18 and 2020/21 for the other four indicators of social capital (in-group trust, out-group trust, membership trust, prosocial outlook).

Memberships in voluntary organizations prove to be a significant predictor of social capital. Members indicate significantly higher levels of in-group trust and out-group trust, they are more strongly oriented towards sociability and perceive society as more helpful and more trusting. In the course of the pandemic, these effects have not changed significantly. The interaction effect (*time x membership*) is insignificant with the exception of perceived trust in society, where the difference between members and non-members has slightly decreased from wave I to wave II ($p < 0.10$).

The results of the regression analyses also indicate that vulnerable groups such as people with lower educational degrees and lower income levels have lower social capital scores, whereas religious affiliations seem to bolster almost all forms of social capital analyzed here.

DISCUSSION

The present study used two large-scale surveys of the adult population in Germany to analyse social capital levels before vs during the COVID-19 pandemic. Trends reported here inform about changes of social capital levels from December 2017 to December 2020, i.e. during the “second lockdown,” when pandemic-related containment and mitigation policies were in effect throughout the country. The findings point to some minor changes in social capital levels (RQ 1) and to the role of voluntary associations as supposed “producers” of social capital (RQ 2).

We find a decline in sociability orientations and perceived trust in society in Germany. The decline of sociability is probably due to physical distancing regulations during the pandemic that largely restricted private forms of face-to-face socializing. Many Germans renounced private parties and social gatherings during the second lockdown (COSMO, 2021). The impression of declining trust levels in society may be due to the heated and controversial debates between supporters and opponents of the government’s containment policies and safeguard measures. These debates dominated media coverage for weeks and may have solidified the impression of a divided, less solidary and less trusting country. It can be assumed that it will be increasingly challenging for state actors to gain broad acceptance for future political regulations (e.g., mandatory vaccination) among the population. However, our findings also show stable levels of in-group trust, out-group trust, membership trust and prosocial attitudes. In this regard, the findings buttress existing data that also show consistently high levels of social cohesion in Germany (Bertelsmann-Stiftung, 2020).

With regard to RQ 1, it can thus be noted that social capital levels have not risen during the pandemic compared to baseline measures from late 2017. This may come as a surprise, in view of previous studies on disasters and crises, which usually conclude that external threats and mass emergencies potentially strengthen social bonds and solidarity (Hawkins and Maurer 2010; Aldrich and Meyer 2015; Meyer 2018). However, such an effect did not occur in the pandemic situation. Unlike in natural disasters, the pandemic did not require people to come together and support each other in the face of adversity. This concrete experience of

willingness to help and solidarity was not present in the COVID-19 pandemic, which in fact demanded the opposite: solidary behaviour was expressed precisely through self-isolation and self-distancing. It can thus be conjectured that under such circumstances, the crisis could not trigger concrete experiences of helpfulness and could not strengthen prosocial norms and trust at the societal level.

Moreover, the findings show that members of volunteer associations have more social capital than non-members. These findings are in line with previous research on voluntary associations and social capital (Burrmann et al., 2019, 2020; van der Meer and van Ingen 2009). A higher social capital level among members of voluntary organizations remained in late 2020 despite the lockdown with its months-long restrictions of in-person meetings and interactions. The added value of trust and prosocial norms generated by civic associations is thus somewhat resistant to short-term societal changes. However, the negative interaction effect for perceived trust in society indicates that this is not the case in every instance or will not be the case for any length of time. Hence, the longer the pandemic lasts and the longer club activities will be disrupted, the more likely it is that this impacts negatively on the social capital generating function of civic associations.

This research note comes with certain strengths as well as limitations: Firstly, a particular strength of the present study is the large and representative sample that allows for general conclusions on the German population. However, we did not collect panel data, i.e. from exactly the same individuals. Hence, we can account for differences at the population level, but not for individual changes. Secondly, all effect sizes reported here are very small. Hence, it is debatable whether these changes and relationships—although some are statistically significant—also have a practical relevance. Thirdly, the data of wave II represent one particular time point in the course of the pandemic. Hence, it is unclear how prolonged contact restrictions affect social networks and social trust levels. Finally, we used a broad conceptualization of social capital that helped to assess different aspects from trust over sociability to prosocial norms. Given the exploratory nature of this study, we did not formulate differentiated hypotheses for each indicator, but aimed to provide an accurate descriptive overview of current developments that may stimulate further research and debates.

Despite these limitations, findings of this study allow some first and tentative conclusions regarding the pandemic’s effects on social capital levels in Germany. Neither did the pandemic lead to a massive decline of trust, nor did it strengthen these features of social capital. Documented changes are rather small: Sociability decreased when contact restrictions were in place and the fierce debates on the right policy course to tackle the pandemic have slightly reinforced the impression among Germans that Germany is a fractured society, in which there appears to be less trust among each other. In order to strengthen social capital, it will be a major challenge for political decision-makers, probably not only in Germany, to effectively combat the pandemic and its social side effects while maintaining public confidence and, to some extent, regaining it.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusion of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

UB, MM, and SB conceived and designed the study. UB and SS analyzed the data. UB and MM wrote the first draft of the paper.

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SUPPLEMENTARY MATERIAL

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