The Negative Influence of Individual Socio-Economic Problems on Political Knowledge

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Abstract

This article addresses hitherto overlooked factors that might contribute to lower political knowledge among citizens with socio-economic problems. Based on findings in psychology and behavioral economics, we argue that economic worries undermine the motivation and cognitive resources to acquire knowledge. The argument is tested in a representative online survey and an experiment during the 2020 COVID-19 outbreak in Germany. The results of the survey are in line with the theoretical expectations. Subjective crisis exposure, particularly when it comes with anxiety and ruminating thoughts, is associated with lower “surveillance” knowledge about politics. A follow-up experiment designed to randomly activate worries about the economic consequences of the COVID-19 crisis could not establish a causal relationship.

Key words: political knowledge, cognitive load, stress, socio-economic problems, anxiety, Germany.

The steep socio-economic gradient in voting and other measures of political involvement is an important challenge for many societies (Dalton, 2017). In this article, we zoom in on a facet of this problem: the influence of socio-economic hardship, such as material scarcity, unemployment, or financial insecurity, on political knowledge. Political knowledge is a crucial foundation for involved citizenship, because it enables participation and helps to connect one's own preferences to party programs (Delli Carpini & Keeter, 1996). If socio-economic problems contribute to depressing political knowledge, this would mean that lower social strata vote less or that their vote choices reflect their economic interests less well (Gilens, 2001). Indeed, there has been growing attention to the consequences of lacking political knowledge for political and economic inequality (Bartels, 2008; Erikson, 2015; Flynn et al., 2017; Macdonald, 2020).

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Against the background of such debates, it is surprising how limited our understanding of the link between socio-economic hardship and political knowledge still is. While a number of studies report correlations between income and political knowledge (Delli Carpini & Keeter, 1996; Grönlund & Milner, 2006; Shaker, 2012; Stolle & Gidengil, 2010), this aspect is usually included as a secondary topic rather than a research focus in its own right. Such studies usually pay limited attention to the psychology of experiencing hardship, something that is difficult to capture with objective class markers alone (Manstead, 2018). As a consequence, we lack theoretical as well as empirical insights into the mechanisms that might link socio-economic hardship to poor knowledge about politics.

In this article, we make a step toward a more explicit engagement with this important research topic. We begin with a theoretical discussion of why concrete experiences of socio-economic hardship should undermine political knowledge. We propose to distinguish two mechanisms: a *stable* knowledge gap resulting from patterns of political socialization that differ by social class; and a *situational* knowledge gap resulting from the cognitive and emotional repercussions of socio-economic hardship at any point in time.

Most research to date has implicitly drawn on the former argument. To demonstrate the relevance of the situational mechanism, we empirically examine the link between socio-economic problems and political knowledge through an original survey and an experiment conducted in Germany during the outbreak of the coronavirus (between April and June 2020). The design of our survey helps us to overcome methodological challenges for unearthing short-term dynamics in socio-economic experiences and political knowledge. The outbreak of the coronavirus suddenly exposed many citizens to economic uncertainties. In addition, by measuring knowledge about the “politics of the day”, we move away from long-term knowledge and get closer to information acquisition in a specific situation characterized by economic stress.

Our results corroborate the intuition that socio-economic problems have an autonomous negative short-term effect on political knowledge. Exposure to the COVID-19 crisis undermines knowledge about current political issues significantly and substantively, in some cases even if the individual economic position prior to the crisis is controlled for. Mirroring findings in psychological research (Hoebel & Lampert, 2020), this effect is stronger for subjective than for objective problems, particularly when they are associated with anxiety and ruminating thoughts. It is also significantly stronger among respondents with relatively high political involvement, as measured by political interest. This interaction effect suggests that intense economic worries can even disrupt information acquisition of citizens who are habitually involved in politics. A follow-up experiment that randomly activated concerns about the economic consequences of the COVID-19 crisis could not conclusively establish a causal effect of such concerns on political knowledge.

Socio-Economic Problems and Political Knowledge

Studying political knowledge has a long history (Campbell et al., 1960). A correlation between knowledge and income (or other indicators of socio-economic position) is a rather consistent finding in this literature. Early studies have shown that knowledge acquisition is heavily influenced by education and socio-economic status (Tichenor et al., 1970), which leads to a deeply uneven distribution (Converse, 1990). While

contemporary debates have shifted to other topics (such as the gender gap) (Jerit & Barabas, 2017), research continues to find that political knowledge is distributed unequally across the income scale (Erikson, 2015; Fraile, 2013; Gerber et al., 2011; Grönlund & Milner, 2006; Shaker, 2012; Stolle & Gidengil, 2010; Verba et al., 1995, pp. 347–350). However, as opposed to political participation (Ojeda, 2018) and interest (Emmenegger et al., 2017; Prior, 2019), there is little research zooming in on this knowledge gap. In fact, income is often only included as one of several factors of interest or as a control variable in studies of political knowledge. As a consequence, we rarely find explicit theoretical arguments explaining the relationship between knowledge and income [for a recent exception, see Marinova & Anduiza (2020)].

Despite this lack of explicit theorizing, the overall literature suggests that socio-economic gaps in political knowledge are likely to result from stable political dispositions, which develop differently over the life courses of rich and poor citizens. Verba et al. (1995) emphasize in their famous model how (inequality in) “civic skills”¹ are developed in the family and other socialization sites. Generally, political knowledge is often viewed in a life-course framework in which early experiences and education in particular are seen as key (Campbell & Niemi, 2016; Ferrín et al., 2019; Galston, 2001; Robinson, 2020). Abendschön and Tausendpfund (2017) document socio-economic inequalities in political knowledge already among first-graders. These knowledge gaps among children and young adults due to education (and other socio-economic factors) continue to exist for much of people’s adult life (Highton, 2009; Jennings, 1996). Hence, one might interpret the frequently observed correlation between income and political knowledge in cross-sectional research as a mere reflection of socialization patterns and educational experiences that differ between rich and poor.

However, there is also a case to be made for a *situational* and direct effect of socio-economic problems on political knowledge. The theoretical difference between long-term and situational explanations has so far been ignored in the literature. In the following, we discuss recent findings in behavioral economics and psychology on how material hardship might impede mental resources for the acquisition, processing, and retrieval of political information. While this literature has recently been used to explain inequality in political efficacy (Marx & Nguyen, 2018), its implications for political knowledge still have to be explored.

Situational Effects of Socio-Economic Problems

Early versions of the situational explanation can be found in the general claim that attention to personal finances creates opportunity costs for political engagement (Brody & Sniderman, 1977; Rosenstone, 1982). These arguments can be refined by bringing in research outside political science about the cognitive effects triggered by economic hardship [for reviews, see Schilbach et al. (2016); Sheehy-Skeffington (2020)].

Poverty research in behavioral economics has focused on cognitive load (Deck & Jahedi, 2015; Shah et al., 2018). Material scarcity is argued to produce an automatic “tunnel view” on money-related issues, which impairs cognitive functioning. To the extent that solving economic problems absorbs mental capacities, these cannot be dedicated to other cognitive tasks. Mani et al. (2013) could even show that randomly

¹Admittedly, a broader concept than political knowledge.

assigned economic problems momentarily depress fluid intelligence. Since knowledge acquisition requires mental engagement (e.g. processing and storing of information from TV news), the argument should be directly applicable.

A related argument points to chronic stress (allostatic load), which also has been shown to interfere with mental performance (Haushofer & Fehr, 2014). Research has repeatedly shown that low socio-economic status tends to be associated with cortisol levels characteristic of chronic and uncontrollable stress (Harris & Schorpp, 2018; Haushofer & Fehr, 2014; Sherman & Mehta, 2020). This is also true for higher status individuals whose position is threatened (Knight & Mehta, 2017). Intense stress is typically linked with emotions of fear and anxiety and the cognition of unpredictability (Fink, 2016). This mix can produce ruminating thoughts (Roger, 2016) that makes it harder to focus on things like political news. Such difficulties should be particularly pronounced if economic problems are associated with social exclusion and stigmatization (Hall et al., 2014).

Finally, political involvement benefits from self-regulation (Holbein, 2017; Wuttke, 2020). Acquiring political knowledge sometimes is fun or a by-product of other activities. But sometimes things like taking up the newspaper compete with other motivations and, hence, require discipline. Some researchers argue that socio-economic problems systematically undermine self-regulation (Sheehy-Skeffington, 2019), e.g. through ego-depletion (Vohs, 2013). Willpower might get exhausted, for instance, by forgoing consumption opportunities. As a consequence, less effort would be allocated to cumbersome aspects of political knowledge acquisition.

In sum, socio-economic problems are likely to interfere with key foundations and elements of knowledge acquisition (Luskin, 1990). This includes the *motivation* and discipline to expose oneself to information, but also the cognitive *abilities* to process, store, and retrieve them.

Three aspects of the argument are worth emphasizing, because they impact how we should study the link between socio-economic factors and political knowledge. First, as mentioned above, the psychology of socio-economic problems has a strong situational logic (Mullainathan & Shafir, 2013). Although some effects are likely to accumulate over time, the strength of the mechanisms theoretically depends on the extent to which economic concerns are mentally activated *in any given situation*. As opposed to existing research, this forces us to think about how to isolate the short-term dynamics in gaining political knowledge.

Second, the arguments do not only hold for objective problems, but also for subjectively experienced and anticipated ones. Much research shows that economic insecurity is at least as detrimental to health and wellbeing as acute problems (Benach et al., 2014; Knight & Mehta, 2017). Uncontrollability, a central cognition involved in the adverse outcomes discussed above, is often particularly high for anticipated socio-economic problems. Cross-disciplinary research on adverse psychological and physiological outcomes consistently shows that subjective appraisals have autonomous explanatory power that often dominates effects of objective socio-economic conditions (Hoebel & Lampert, 2020; Lübke, forthcoming; Manstead, 2018; Schenck-Fontaine & Panico, 2019; Schmalor & Heine, forthcoming; Sverke et al., 2002; Tay et al., 2017). Together, these points suggest that the effect of socio-economic position might not necessarily be linear, but that there are distinct experiences (such as acute deprivation or insecurity) that have particularly strong psychological repercussions. As opposed to

existing research, this forces us to move away from analyzing simple linear income effects and instead explore a range of *concrete* problems as well as their *subjective* dimension.

Third, the cognitive effects should depend on the issue at hand. The notion of tunneling implies that situational salience of socio-economic problems should produce a subconscious and automatic focus on money-related aspects [for experimental evidence, see [Shah et al. \(2018\)](#)]. With regard to knowledge acquisition, this could imply that affected citizens focus on economic issues in the news at the expense of general political issues. People exposed to socio-economic problems could then be disproportionately informed about issues, such as the state of the economy, the welfare state, or trade policies. [Marinova and Anduiza \(2020\)](#) show that the unemployed generally have lower knowledge, but that they assess unemployment rates more accurately during downturns. This is consistent with the argument about biased attention allocation to economic issues (or tunneling). As opposed to existing research, this forces us to *compare* how socio-economic problems influence knowledge of economic and non-economic issues.

To conclude the theoretical discussion, we argue that there is an implicit tension in the literature on the socio-economic foundations of political knowledge between a focus on long- and short-term mechanisms. Because the latter has received scant attention, if any, we focus on isolating situational effects in this contribution.²

Hypothesis and Research Questions

Based on our theoretical considerations, we expect that socio-economic problems (such as material deprivation or insecurity) impede political information acquisition and are therefore associated with lower political knowledge (Hypothesis 1). We expect this association to be stronger for subjective problems than for objective ones (Hypothesis 2). We also expect the negative effect of socio-economic problems to be weaker for knowledge questions that relate to economic issues (compared to non-economic issues), because people with such problems are expected to selectively attend to money-related matters (Hypothesis 3).

Going back to the distinction between long- and short-term perspectives discussed above, an open question is how situational socio-economic experiences relate to the habitual nature of political involvement, as observed most notably for political interest ([Emmenegger et al., 2017](#); [Prior, 2019](#)). It might be that habitual political interest insulates people from the adverse effects on information acquisition. It is also possible that socio-economic problems, if experienced as sufficiently intense, temporarily interfere with the extent to which political interest is translated into information acquisition and knowledge. Because previous research gives us little guidance on this aspect, we treat it as an empirical question.

Conceptualizing Political Knowledge

Although the terminology is not always clear, political knowledge is sometimes seen to include two broad concepts which partly map onto our distinction of long- and

²Which is not to deny the importance of explicit developmental frameworks for studying unequal knowledge.

short-term perspectives: political information and political awareness or sophistication (Boudreau & Lupia, 2011). Whereas the former is based on a factual recollection in memory, political awareness describes a more profound understanding of politics (Zaller, 1992). Because political awareness is shaped by educational attainment and political interest, it is less likely to change quickly. People with a general understanding of how politics works can interpret new events without updating their level of factual knowledge. The key here is that information is required to generate awareness, but this awareness should not respond immediately to periods in which attention to information is low. In our view, factual knowledge is the preferred choice to assess the *situational* effects of cognitive or allostatic load, because “political information, more directly than any of the alternative measures, capture what has actually gotten into people’s minds” (Zaller, 1992, p. 21).

Barabas et al. (2014) further distinguish a topical and a temporal dimension of knowledge questions. The latter, which is particularly relevant for our research, distinguishes “static” and “surveillance” knowledge. Static knowledge is about stable political aspects that change very little (e.g. electoral rules), while surveillance knowledge is about recent political events. The distinction matters, because both types reflect different forms of knowledge acquisition. Similar to awareness, static knowledge can be accumulated in various ways. Surveillance knowledge, however, requires attention to political news at a specific point in time. This makes it more suitable to study the situational influence of socio-economic problems. For example, a citizen who suddenly worries about his or her job security might be distracted from following the news for some weeks or months. But the person is unlikely to forget previous knowledge about slow-changing aspects of politics.

Study 1

In the absence of experimental or panel data, the influence of socio-economic experiences on political knowledge can be made plausible by narrowing down the time frame of knowledge acquisition and linking it to economic experiences within this period. This is difficult in much of the existing survey data, because knowledge questions often are about more or less static aspects³ and because, in many datasets, the share of respondents with intense socio-economic problems is limited. This study partially overcomes these problems by leveraging the 2020 outbreak of the coronavirus in Germany as a major economic shock that affected many middle-class citizens. Germany is an interesting case, because the shock hit it during exceptionally favorable economic conditions, so that many citizens experienced an unexpected deterioration of their financial outlook. At the same time, its strong welfare state and ambitious discretionary measures during the crisis make it a rather conservative test for the effect of economic worries. The German government implemented comparatively large fiscal stimulus and ad-hoc social security measures (Eichhorst et al., 2020), which greatly contributed to stabilizing

³By their very nature, the American National Election Study and the German Longitudinal Election Study merely assess static knowledge of politics, e.g. by asking about the positions of various politicians or the electoral threshold for political parties. Probing surveillance knowledge is impossible if field work takes multiple weeks or if data are supposed to be comparable across time. As we explained above, static knowledge items are unsuitable for our purposes, because it is unlikely for people to forget information when they experience socio-economic problems. And even if they are currently facing economic hardship, many questions are so common that citizens have a decent chance to learn about them at some point.

incomes. Economic worries and anxieties, hence, should be less pronounced than in countries with weaker welfare states.

To test the relationship between socio-economic problems and political knowledge, we conducted a representative online survey ($N = 1,670$) in Germany between April 20 to May 5, 2020, right during the COVID-19 pandemic.⁴ Our study thus falls right into the period of the lockdown, which started on March 22 and was lifted gradually from May 6 onwards (see [Supplementary Figure A1](#)).

Our main dependent variable, political knowledge, is the number of correct answers (0–8) to eight questions on economic and political issues that occurred in the weeks prior to the start of our survey (see [Supplementary Appendix A](#)). We included topics based on the following criteria: first, the topic had to be covered at least once by a tabloid and a quality newspaper so that all respondents had a choice of acquiring knowledge about it. Second, we restricted our choice to very recent and ongoing topics for which knowledge was impossible or unlikely without attention to current political news. Hence, we clearly measure surveillance rather than static knowledge. Third, we include four topics related to economic consequences of the lockdown (benefits for furloughed workers, current economic forecasts, OPEC policy, and EU debt management) and four topics related to general political issues (American primaries, anti-democratic backlash in Hungary, refugee situation in Greece, and developments in a German party).

All questions were closed format with one correct answer option, three wrong ones, and a “don’t know” option. Although there is some debate about this, discouraging or removing the “don’t know” option in the closed format might increase lucky guessing and decrease measurement quality ([Luskin & Bullock, 2011](#)).⁵ The order of the knowledge questions as well as the respective response options were fully randomized across respondents.

There is no consensus on how to best measure socio-economic problems and prior research leads us to expect that their objective and subjective dimensions might have distinct effects. Capturing both is a precondition to test Hypothesis 2. For an objective measurement, we asked respondents about their net household income in categories on an 11-point scale and about their employment status. For a subjective measurement, we asked on five-point Likert scales whether they consider their current incomes and jobs as secure. As supplementary information, we asked respondents to make both assessments retrospectively for the time before the outbreak of the crisis. The items ask for neutral assessments, which is analytically distinct from the affective intensity of insecurity ([Jiang & Lavaysse, 2018](#)). We therefore included two items, which measure mental engagement with and emotional arousal by the personal economic situation. These are inspired by our theoretical perspective on the cognitive and affective implications of socio-economic problems. Specifically, we asked on five-point Likert scales whether respondents agree to these statements: “I currently think a lot about my economic situation” and “When I think about my economic situation this makes me anxious.”

⁴The sample is representative in terms of sex, age, and education. More information about sampling procedure and access panel structure can be found at <https://www.respondi.com/access-panel> and in the [Supplementary Information. Supplementary Figure A1](#) gives an overview of the development of COVID-19 cases and economic insecurity exemplified by Google search requests for “short-time work”.

⁵There are further debates about knowledge measurement, e.g. regarding open versus closed questions ([Robison, 2015](#)) or verbal versus visual knowledge ([Munzert & Selb, 2017](#); [Prior, 2014](#)). Because the literature does not produce unambiguous recommendations, we opted for multiple-choice questions. This is the most common format and provides the most efficient data generation process.

By being conceptually closer to the theorized mechanisms, they arguably provide more favorable conditions to confirm our hypotheses. It has to be kept in mind, however, that these items are likely to reflect individual differences in how people react to objective economic circumstance.⁶

We ran a series of multivariate linear regression analyses to predict the level of political knowledge based on respondents' objective and subjective socio-economic problems. With the exception of income, we treat all of our main independent variables as categorical, because we do not assume a linear effect of socio-economic problems on political knowledge. We control, in all our models, for sex, education, age, political interest, social class, rural or urban residence, residence in east or west Germany, date of survey, and question order.

Findings

To give an impression of how citizens were personally affected by the COVID-19 crisis and to what extent this provides us with analytical leverage, we can compare current and retrospective subjective assessments. If the pandemic would take the form of an exogenous shock, this would greatly facilitate isolating the effect of socio-economic problems. As it turns out, however, there are few dramatic changes. For instance, more than 50% of the entire sample report (very) low income insecurity at both time points. Around 15% of our sample move from (very) low to some insecurity and only 5–6% to (very) high insecurity. Also for job insecurity there are few dramatic shifts. Of course, these are subjective accounts and changes might be suppressed by asking for current and retrospective assessments in the same survey and format. The stability is less pronounced if we compare previous income security and the variables about mental engagement and anxiety. About 26% of the sample report (very) low income insecurity before the crisis, but (very) strongly agree with the statement that they currently think a lot about their economic situation. And for 21% of the sample (very) low income pre-crisis insecurity coincides with current anxiety about their economic situation. Hence, it is possible that, at the time of the survey, the COVID-19 crisis had not (yet) translated into concrete threats that affected cognitive assessments of economic security; but a more diffuse threat is tangible, because even previously secure respondents report thinking a lot and being anxious about their economic situation. The pandemic, even if not a full-blown economic shock, therefore provides an opportunity to study worries in a relatively large group that is not characterized by chronic socio-economic disadvantage.

As a next step, we report results from the multivariate linear regression models that predict the effect of socio-economic problems on the number of correct answers to the knowledge questions (Figure 1). Our results show, first, that there are limited or no effects of objective measures (employment and income). In line with the often assumed politically integrative function of employment, we see lower knowledge among unemployed, inactive, and part-time workers (compared to full-time workers). Interestingly, workers on government-sponsored "short-time work" (*Kurzarbeit*) show

⁶The distributions of the indicators are shown in [Supplementary Figure A2](#). The survey included further variables, e.g. how the working situation has changed due to the COVID-19 crisis or whether the respondent worries about her economic future. We omit those variables here for space reasons. They broadly confirm effects reported in the text (available upon request).

Figure 1.
Predicted political knowledge by socio-economic problems with 95% confidence intervals.

Note. Based on linear regression models, the dependent variable is the total number of correct answers to all knowledge questions ranging from zero to eight.

higher knowledge. These are partially or fully furloughed workers (whose forgone wages are replaced by unemployment insurance benefits) who should have more time to follow the news. Because the subsidy aims at avoiding lay-offs and instead keeping workers in their firms during downturns, it creates relatively strong security. Secondly, for most of our indicators which ask about a subjective evaluation of respondents' current situation, we find a significant decrease in political knowledge scores whenever respondents

choose the least favorable category. This provides empirical support for Hypotheses 1 and 2.

Respondents who very strongly think about their current economic situation have on average .53 ($p = .003$) fewer correct answers as compared to respondents who indicate very low mental engagement. Similarly, being strongly anxious about one's personal financial situation decreases the number of correct answers by .69 ($p = .000$) compared to those who are very little anxious. In contrast to objective income levels, we also see that respondents with a perception of strong income insecurity answer .55 ($p = .008$) fewer questions correctly than those who indicate strong income security. However, we do not find effects for job insecurity.

How plausibly can we attribute these patterns to a causal influence of socio-economic problems? While we cannot fully resolve this with our data, a more conservative test is to control in addition for the subjective assessment of security before the crisis. In this way, we reduce the influence of unobserved long-term socio-economic differences and move closer to isolating short-term experiences during the crisis. This strategy is limited by the strong correlation of retrospective and current assessments. But (as discussed above) current mental engagement and anxiety do not fully overlap with pre-crisis assessments and hence provide some variation for this type of analysis. [Supplementary Figure A3](#) presents the results of replicating the three significant models from [Figure 1](#) with an additional control for pre-crisis insecurity. Unsurprisingly, the effect of current income insecurity becomes weaker and insignificant. The effect of anxiety and thinking about the economic situation remain, however, similar to the original finding. This can be seen as tentative support for a causal interpretation of their effects.

To assess Hypothesis 3, we re-ran the models underlying [Figure 1](#) separately for two knowledge scales that are restricted either to the four economic or non-economic issues ([Figure 2](#)). These analyses show that the effect of socio-economic problems is generally driven by non-economic issues. In fact, all significant effects observed in [Figure 1](#) disappear for the knowledge scale on economic issues. This is consistent with the notion that such problems produce an attention bias in favor of money-related stimuli. However, the general level of knowledge is lower for economic issues, so that general difficulty of the questions provides an alternative explanation for the different patterns. These differences also hold when we run logistic regressions predicting the correct answer to each item separately (see [Supplementary Tables A3–A8](#)). There are no clear patterns between individual political and economic knowledge questions though.

Finally, we addressed our research question about effect heterogeneity by habitual political involvement. We did so by using political interest (on a scale from 1 to 4) as a moderator variable. Because the two variables capturing mental engagement and anxiety produced the strongest effects, we focus on them in this analysis. Based on previous results, we generate a dummy variable rumination if one of the two variables takes the highest value (very strong anxiety/thinking a lot about economic situation) and interact it with political interest. The results are plotted in [Figure 3](#). What we observe is that rumination does not affect those indicating very low interest who are supposedly habitually uninvolved in politics. The predicted number of correct answers is close to the expected value for random guessing, which indicates a floor effect. However, rumination does come with a marked reduction in political knowledge among those who indicate (very) strong interest. This suggests that situationally dedicating mental capacity to

Figure 2.

Predictions of knowledge by knowledge type with 95% confidence intervals.

Note. Based on linear regression models, the dependent variable is the total number of correct answers to all political knowledge and economic knowledge questions with each index ranging from zero to four.

economic problems interferes with the translation of political interest into knowledge. In passing, we note that this result holds if we proxy habitual involvement by age instead of political interest.

Figure 3.
Predicted political knowledge by rumination and political interest with 95% confidence intervals.

Note. Based on linear regression model with interaction effect between rumination and political interest. The dependent variable is the total number of correct answers to all knowledge questions ranging from zero to eight. The dummy for rumination takes the value of one if respondents either indicate very strong anxiety or thinking a lot about their economic situation.

As further robustness check, we ran interactions of political interest with further indicators of socio-economic problems and also separately for the two rumination variables (Supplementary Figure A4). In sum, we find that while there is no effect of thinking about or being anxious about one’s economic situation for those with low political interest, higher affective and cognitive involvement is associated with a significant and substantial drop in political knowledge for strongly interested respondents. Furthermore, the number of correctly answered questions is slightly (but insignificantly) higher when the perceived income security is high among strongly interested respondents, but there is no such link for those with low interest. There are virtually no effects for the interactions with job security and income. Finally and in line with our previous observation, respondents in short-time work show a high level of political knowledge regardless of their interest in politics. For all other categories of employment status there is a clear gap between those with strong and no political interest, but there is no difference in political knowledge between full-time working respondents those of other job categories regardless of level of political interest.

Discussion Study 1

Study 1, by and large, confirmed our intuition that socio-economic problems depress political knowledge (Hypothesis 1). The effect is non-linear and generally limited to the most severely affected. This confirms that crude operationalizations used in previous literature, such as income brackets, risk missing important socio-economic influences.

Moreover, the effect is clearest for variables measuring cognitive absorption and emotional arousal and weakest for objective measures. Neutral assessment of economic insecurity is in between. This corresponds to the placement of these variables in the causal chain derived from psychological research and therefore makes sense in the light of the presented arguments. One should also note that anxiety and mental engagement can refer to broader problems than insecurity narrowly defined. For instance, even secure income can come with worries about a decline relative to one's reference group or more uncertain prospects of anticipated upward mobility. In any case, we can clearly confirm Hypothesis 2. Subjective predictors often raise particularly intense endogeneity concerns. This is less of a problem in our case, because our dependent variable comes close to a behavioral measure of information acquisition during the weeks prior to the survey.

A number of observations increase our confidence in a causal interpretation of the reported effects. First, by focusing on surveillance knowledge, we can narrow down the reference period of information acquisition and plausibly link results to recent experiences. Second, our results at least partially hold when we control for retrospective income security. Third, the fact that the findings are driven by non-economic knowledge items is consistent with the underlying theory (Hypothesis 3). Fourth, that psychological effects of current problems are strong enough to depress the influence of political interest on information acquisition was not expected in this form, but is an observation that adds to the plausibility of interpreting the effects as meaningful.

Of course, results from cross-sectional observational studies are inevitably limited in establishing causality. Clearly, the COVID-19 lockdown did not amount to an exogenous shock that would have rapidly shifted concrete economic assessments for most respondents. To remedy this problem, we tried to observe information acquisition directly in an experimental setting.

Study 2

Experimentally inducing economic worries is non-trivial. We follow established practice in emotion research to use a bottom-up treatment, where participants are asked to recall or imagine a situation that evokes the mental experience of interest ([Albertson & Gadarian, 2016](#)). The COVID-19 crisis is a favorable context in which economic problems arguably can be imagined more easily than at other times.

We recruited 499 participants in an online survey from Clickworker, a German platform, in June 2020. Similar to [Valentino et al. \(2011\)](#), the treatment group was asked to think and briefly write about personal consequences of another shutdown in a possible second coronavirus outbreak. A photo displaying a distressed woman with a pile of invoices was included to strengthen the treatment (for exact question wording, see [Supplementary Appendix B](#)). The control group received a similar task about relaxing activities (with a picture of a beach). We forced respondents to stay on that page for at least 60 seconds.

After the treatment, both groups were asked to read a text about current developments in the U.S. presidential race (611 words). It was chosen as a topic neither too difficult nor unfamiliar for respondents. Few Germans closely follow American Politics so that the article should include new information for most respondents. The text was followed by 10 questions about it (5 closed format with 5 response options and do not know categories, 5 were open format with no do not know option).

For our dependent variable, we hand-coded the answers to the open questions and calculated the number of correct open and closed answers. Neither controlling for age, sex, education, political interest, income, state, and perceived economic problems influenced results, nor removing speeders and respondents with very long duration.

Findings

Preliminary analyses revealed two noteworthy patterns in our online sample. First, the sample is strongly skewed toward highly educated participants. Only 26% of respondents have finished school without a diploma that qualifies for university. Second and relatedly, the accuracy of information acquisition was rather high. On average, respondents answered 6.79 questions correctly. This suggests that we recruited an exceptionally involved sample that arguably brought high prior knowledge and interest to the experiment.

The treatment failed to significantly influence information acquisition (see [Supplementary Table B2](#)). The mean in the worry ($M = 6.75$, 95% CI: 6.38; 7.12) and the relax condition ($M = 6.83$, 95% CI: 6.47; 7.19) showed a small and insignificant difference. This pattern does not change if we analyze closed and open questions separately. Political interest did not moderate treatment effects. There are larger knowledge gaps between treatment groups in the expected direction among respondents with very low interest and low education. But because these groups are small and have strongly overlapping confidence intervals they do not permit any reliable interpretation.

Discussion Study 2

The non-finding means that we cannot conclusively attribute lower knowledge to the causal influence of the psychological consequences of socio-economic problems. However, before the hypothesis is dismissed, the possibility should be considered that methodological choices influenced the result. There are several concerns. First, our sample predominantly consisted of educated and already politically knowledgeable participants. It might simply be that our task was on average too easy for this group. Second, real-world developments might have re-enforced the first point. Because of widespread anti-racism protests around the death of George Floyd (May 26, 2020), U.S. politics were much more salient in Germany during our experiment than expected. This could have increased previous knowledge on the subject. Third, it could be that real-world effects on political knowledge are driven more by self-exposure to news than by processing capacity. The former was not measured in this experiment but could be included in future analyses. Fourth, it could of course be that our treatment was simply too weak and that what works for other emotions does not easily extend to economic worries. Future research should zoom in on the question of how to effectively design treatments for economic worries.

General conclusions

In this contribution, we argued that situational experiences of socio-economic problems impede information acquisition and can therefore contribute to lower political knowledge above and beyond stable differences between socio-economic groups. We presented evidence from an observational study, which is in line with this argument.

Respondents who thought a lot or were anxious about their income during the COVID-19 lockdown showed lower surveillance knowledge. Because this knowledge referred to recent political developments, we can plausibly link the two variables.

There are obvious limitations to our research. We cannot establish causality, because the tendency to worry about income might be correlated with unobserved influential variables. This is even more so, as our experimental replication failed to produce significant effects. Relatedly, we also cannot establish the mechanisms underlying our effects. It could be that they result from lower self-exposure to news, from worse processing of information, difficulties in recalling information, or from factors unrelated to our theory. With regard to mechanisms, it would also be important to open the blackbox of knowledge acquisition and study how the usage of different types of media is influenced by economic worries.

That said, this article provides, at the very least, suggestive evidence for a potentially important but under-studied psychological process that could contribute to inequality in political engagement. The presented hypotheses therefore deserve attention in future research. One fruitful avenue, as pointed out above, would be to refine the experimental approach. Besides exploring different treatments, information sources, and knowledge measures, it would also be important to include self-selection into news as a dependent variable. An elegant way to test the theory more fully could be to use the Dynamic Process Tracing Environment, which allows to observe directly how people navigate news content in different experimental conditions (Andersen et al., 2019). A complement or alternative would be to study attention allocation with eye-tracking methodology. A second possible approach builds on our observational study. A panel study that traces respondents' socio-economic experiences and their surveillance knowledge would be a great advantage in documenting the real-world influence of the former. While this is made feasible in general by relatively cheap online sampling, it would also be desirable for existing campaign panels to adjust their knowledge measurement and attention to socio-economic problems.

Supplementary Data

[Supplementary Data](#) are available at *IJPOR* online.

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