Check for updates

OPEN ACCESS

EDITED BY Sharon Coen, University of Salford, United Kingdom

REVIEWED BY Juan Diego García-Castro, University of Costa Rica, Costa Rica Efraín García-Sánchez, University of Granada, Spain

*CORRESPONDENCE Silvia Mari ⊠ silvia.mari@unimib.it

SPECIALTY SECTION This article was submitted to Political Participation, a section of the journal Frontiers in Political Science

RECEIVED 10 July 2022 ACCEPTED 17 February 2023 PUBLISHED 13 March 2023

CITATION

Vezzoli M, Mari S, Valtorta RR and Volpato C (2023) The impacts of COVID-19 on the relationship between perceived economic inequality and political action among socioeconomic classes. *Front. Polit. Sci.* 5:990847. doi: 10.3389/fpos.2023.990847

COPYRIGHT

© 2023 Vezzoli, Mari, Valtorta and Volpato. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

The impacts of COVID-19 on the relationship between perceived economic inequality and political action among socioeconomic classes

Michela Vezzoli, Silvia Mari*, Roberta Rosa Valtorta and Chiara Volpato

Department of Psychology, University of Milano-Bicocca, Milan, Italy

Economic inequality qualifies as a structural characteristic leading to political action, albeit this relationship manifests differently across socioeconomic classes. COVID-19 pandemic has amplified existing economic inequalities in ways that increased social tensions and political unrest around the world. This research investigates the effect of COVID-19 personal impacts on the relationship between perceived economic inequality and individuals' political participation. An online survey was administered to an Italian representative sample of 1,446 people (51% women, mean age of 42.42 years, SD = 12.87). The questionnaire assessed the perceived economic inequality, the personal impacts of COVID-19 (i.e., on finance, mental health, and ability to procure resources), and individuals' involvement in political participation. Moderation analyses were conducted separately for different socioeconomic classes (i.e., lower, middle, and upper classes). Results showed that individuals who perceive greater economic inequality, while controlling for perceived wage gap, are more likely to take action, but only if they belong to the higher class. For lower-class individuals, perceiving greater inequality erodes political action. Interaction effects occurred mainly in the middle class and with COVID-19 impacts on resources procurement, which inhibits political action.

KEYWORDS

political participation, activism, formal political participation, COVID-19 impact, socioeconomic classes, perceived economic inequality, perceived wage gap

1. Introduction

The COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents unprecedented challenges to public health, political and economic systems. According to a recent report by Oxfam (Ahmed et al., 2022), these challenges have resulted in the widening of inequalities in every country on Earth, especially economic inequalities. While the ten richest men in the world have doubled their fortunes, more than 163 million people have fallen into poverty. In relative terms, the ten super-rich men hold six times the wealth of the poorest 40% of the world's population. Thus, not only did economic systems find themselves unprepared to protect the rights of the most economically vulnerable people when the pandemic struck, but it has also actively favored those who were already wealthy. Economic inequality had been already pointed out as one of the defining challenges of

our times (Newell, 2013), before the pandemic. The latter contributed to the escalation of economic inequality around the globe in unprecedented ways (Buheji et al., 2020).

A large body of political and sociological research has shown that rising levels of economic inequality are responsible for many negative outcomes for society as a whole and for people who live in it (Killewald et al., 2017; Dwyer, 2018). In relatively unequal societies, population health is lower (Kawachi et al., 2010; Pickett and Wilkinson, 2015), crime rates are higher (van Wilsem, 2004), housing conditions are more disparate (Dwyer, 2009), interpersonal trust erodes (Rothstein and Uslaner, 2005), and life satisfaction declines (Delhey and Kohler, 2011; Vezzoli et al., 2022). Considering that economic inequality has a negative impact on living standards (Wilkinson and Pickett, 2018), citizens' political actions might be impacted by high levels of economic inequality. Indeed, political action is shaped by the structural characteristics of society, such as the degree of grievance and discontent among a population, the availability of cultural and material resources, and contexts in which protest is allowed to flourish (Kriesi et al., 2012; Schoene, 2017). Thus, economic inequality qualifies as one potential structural characteristic leading to political action. Generally, studies on economic inequality (typically assessed through objective indicators of the inequality degree) and political participation follow two competing perspectives (Beramendi and Anderson, 2008). There are some studies that claim economic inequality increases political participation. Inequality could lead to higher divergences in preferences among the public, especially when it comes to redistributive policies, which might fuel debate and further mobilize the public (Oliver, 2001; Brady, 2004). Others, on the contrary, claim that economic inequality discourages people from participating in political actions, especially among deprived citizens (Goodin and Dryzek, 1980; Lukes, 2004; Solt, 2008). In Goodin and Dryzek's (1980) view, the less fortunate are justified in staying away from games that are rigged for them. This might be explained by the fact that people in lower economic brackets refrain from participating, either because they have fewer resources or they feel powerless and, thus, believe that participation will be futile as the system is stacked against them (Uslaner and Brown, 2005). Studies on political actions that involved personal perception of the level of economic inequality also point to ambivalent results. Although these studies have established that individuals' perception of inequality predicts political action better than objective indicators of inequality (Jo and Choi, 2019; Lee and Kwon, 2019), the ways in which it affects political actions are found to vary. While some have shown that perceiving more inequality encourages individuals to engage in political action (Jo, 2016; Lee and Kwon, 2019), some others have found the opposite (Jo and Choi, 2019). In addition, it has also been found that perceiving more inequality motivates non-institutional forms of political action (e.g., petitioning) but not institutional actions, like voting (Lee and Kwon, 2019). Despite the absence of an agreement on the link between inequality and political actions, we apprehend from the relevant literature that the perception of inequality is arguably an important element for assessing the impact of how economic inequality affects political actions since people's perceptions do not always match objective realities (Gimpelson and Treisman, 2018; Kuhn, 2020). Thus, this examination focuses on the effect of perceived economic inequality on political actions. Numerous researchers across the social sciences have developed various methods to elicit perceptions of economic inequality (see Castillo et al., 2022; Jachimowicz et al., 2022), like the diagrammatic perception (Easterbrook, 2021), support for inequality (Wiwad et al., 2019), and perception of economic inequality in everyday life and among acquaintances (García-Castro et al., 2019). In this study, we adopted the Perceived Economic Inequality Scale (PEIS; Valtorta et al., 2023), a measure that taps into the individual perception of how economic resources are distributed at the national level and how it feels unfair. This latter aspect is an important characteristic of our main predictor as research has pointed out that is not the perception of inequality itself that spurs an effect, but the perception of its unfairness (Starmans et al., 2017). Indeed, together with identity and efficacy, non-affective injustice is a strong and unique predictor of political attitudes, intentions, and behaviors (Van Zomeren et al., 2008; Thomas et al., 2020). Among the many ways to conceptualize inequality (see Easterbrook, 2021), might be regarded as the most suitable for exploring political participation. In addition, we also considered the effects of one of the most frequently used measures of economic inequality, which involves asking participants an estimation regarding differences in wages between better- and less-paid individuals in a specific context (e.g., an Italian firm; Castillo et al., 2012). Perceived wage gap measure is found to be a good predictor of political attitudes (García-Sánchez et al., 2018; Pedersen and Mutz, 2019). Thus, it would be interesting to observe whether it also links to political actions and, if so, in what way with respect to the PEIS. Compared to the latter, the perceived wage gap taps into a different facet of inequality, that is, wage disparity.

Although the discrepancies among findings, much past research from different disciplines has evidenced how political action differentiates among socioeconomic classes (Brown-Iannuzzi et al., 2017). In the social sciences, social class (i.e., socioeconomic status or SES) is broadly defined as one's position within a socioeconomic hierarchy based on socioeconomic indicators, such as income, educational attainment, or occupational prestige (Kraus and Stephens, 2012; Kraus et al., 2012). This conceptualization captures the resource-based aspects of social class, specifically the influence of particular class contexts and the access to resources. The material conditions in which people grow up and live play a key role in shaping individuals' life trajectories in profound ways (Adler et al., 1994) and influencing how they think and react to their social environment and political behaviors. Those who are placed in lower social classes tend to act politically less than their more advantaged counterparts (Gallego, 2007; Solt, 2008, 2015; Caínzos and Voces, 2010; Brown-Iannuzzi et al., 2017; Manstead, 2018). In contrast, those who are placed in higher socioeconomic classes are significantly more likely to report engaging in both formal political activities such as attending political meetings (Page et al., 2013) and direct actions such as signing a petition (Berman and Wittig, 2004). Together, these findings suggest that lower-class individuals are more politically inactive. Lower-class citizens' lack of political action on their part may seem at odds with the rational voter model at first glance, as those who are more deprived should act more politically. Many theories have been proposed for explaining political inaction on the basis of socioeconomic position. The *resource model* (Gurin et al., 1990) contends that lower-class individuals participate less in politics than those in higher classes because they often lack resources, such as money, free time, civic skills, or the level of involvement required to participate in politics. Social and contextual factors impacting political action are also highlighted in the resource model. The model specifically suggests that higherclass individuals live in environments where political action, such as sending letters to political representatives and signing petitions, is not just encouraged but represents a social norm. Instead, lowerclass individuals typically reside in places where such behaviors are not part of the social norm. In a nutshell, material circumstances have a profound effect on both people's perceptions of their social environment and their political behavior.

Given that the discussed literature on the relationship between inequality and political action investigated such a relationship in times different from the one we have experienced in the last 2 years because of the pandemic, we wonder whether and how the impacts of COVID-19 on people's lives has affected the relationship between perceived economic inequality and political action among social classes.

The spread of COVID-19 in Italy, the context of this study, started in February 2020. Italy was the first European country to face the pandemic wave. Since its onset, approximately 24 million Italians have been affected by COVID-19, and more than 180,000 people have died (Ministero della Salute, 2022, https://rb.gy/l85uh4). On the one hand, the national health system was struggling to respond effectively to the needs of those who got infected. On the other hand, extraordinary measures to prevent the virus spread were instituted, like banning all types of gatherings, shutting schools and universities, closing all businesses but essential ones, and limiting unjustified movements of people. By the time we collected data for this study (January 2021), Italians had experienced major negative effects in their lives. The pandemic disruptively changed habits, routines, and lifestyles affecting human relationships and the productivity of the entire country (Berardi et al., 2020; Cerami et al., 2020). The increased distress exacerbated the risk of negative mental health outcomes, such as the worsening of anxious and depressive symptoms, addictive behaviors, and thought disorders (Sani et al., 2020; Davico et al., 2021). At the economic level, despite the institution of tailored fiscal policies, the country experienced the biggest economic contraction since the end of World War II as the GDP decreased by 8.8% in 2020 compared to 2019 (ISTA, 2021). Other than amplifying existing economic inequalities, the dramatic changes in society due to COVID-19 have brought to the fore the negative effects of inequality (Jetten et al., 2021). Indeed, the pandemic has not only exacerbated inequality, but the efforts to fight it have also adversely affected the most vulnerable (Brandolini, 2022), which compromised the effectiveness of pandemic responses (Goldin and Muggah, 2020; Jetten et al., 2020). It has been evidenced that during the spring of 2020, lower-class individuals were less likely to be able to comply with social-distancing measures due to a lower likelihood of working from home or an inability to avoid crowded public transportation (Ogbunu, 2020). This then gave more affluent people a social-distancing head start, lowering their risk of exposure to the virus and falling ill (Valentino-De Vries et al., 2020). Moreover, lockdowns and other restrictive measures implemented to reduce the spread of COVID-19 have adversely affected labor markets and led to substantial job losses, particularly among those employed in low-skilled jobs (Sedik and Xu, 2020), typical of lower-class individuals. These drastic reductions in living standards in a short period of time may stimulate grievances and feelings of injustice, which in turn may motivate people to act politically. Recent evidence shows that COVID-19 has contributed to increasing social tensions and protests (Iacoella et al., 2021) due to its effects on socioeconomic outcomes (Sedik and Xu, 2020). During the course of the pandemic, civil unrest occurred in Italy as well, ranging from peaceful organized protests to riots and violent confrontations with police (Hughes, 2020). Thus, in today's turbulent political and social landscape, studying the effects of economic inequality on citizens' political actions in conjunction with the effects of COVID-19 on their personal lives becomes increasingly important.

This research aims at investigating the effect of COVID-19 personal impacts on the relationship between perceived economic inequality and individuals' political participation. The aim is to understand whether the impacts of COVID-19 have changed how individuals themselves respond politically to economic inequality. This moderation model will be tested separately on the lower, middle, and upper socioeonomic classes, which were defined based on the material resources held by individuals (i.e., income, educational attainment, and job prestige). Besides studying the association of perceived economic inequality with political action and the moderating role of COVID-19 personal impacts, the second focus of this study is to examine different forms of participation related to the target model. Political participation is a multifaceted behavior: It comprises any actions intended to influence actual political outcomes by targeting relevant political or societal elites (Brady, 1999). This includes not only participating in demonstrations, striking, boycotting products, and other forms of protest behavior but also formal political actions (e.g., membership in political parties). In this paper, we focused on two forms of manifest political participation (Ekman and Amnå, 2012). Even though we acknowledge that also *latent* forms of political actions exist (e.g., political involvement and civic engagement; see Ekman and Amnå, 2012), we aimed to address specifically observable political behaviors that are directed toward influencing governmental decisions and political outcomes. On the one hand, we examined collective forms of formal political participation, such as donating money to a political organization or being involved in trade unions activities. On the other hand, we investigated legal extra-parliamentary political participation (Ekman and Amnå, 2012). We operationalized this type of political participation in two different forms. First, we examined individuals' general proneness to participate in legal political actions (e.g., signing petitions, participating in protests). Second, we considered individuals' political participation as a response to the dissatisfaction with the Italian socio-economic conditions, expressed through actions, like participating in legal manifestation.

2. Methods

2.1. Sample

The cross-sectional study was conducted with a representative sample of 1,497 Italians who consented to take part. The sample

10.3389/fpos.2023.990847

was stratified by gender, age, region of residence, education, and employment status. Participants had to be at least 18 years old to be included in the study. Ipsos recruited participants in January 2021 from its panel. The final sample consists of 1,446 participants ($n_{\text{female}} = 742$; *M* age = 42.42, *SD* = 12.87) after excluding those who did not complete the questionnaire (n = 51). Ethical approval for minimal risk studies was received from the local psychology department's commission.

Before data collection, informed consent was obtained from participants. They were informed of the anonymity of the data collection and that they could withdraw from the study at any time. In exchange for participation, respondents of Ipsos panel earn points that can be converted into prizes, vouchers, or donations. Answering our questionnaire was worth 150 points.

2.2. Measures

The measures used for this study are part of a larger survey where participants were asked to answer other measures. To view the complete survey, please visit https://osf.io/udx4v/.

The reliability of the scales was assessed using Cronbach's alpha, except for two-item scales, for which we calculated the Spearman-Brown coefficient (r_s ; Eisinga et al., 2013).

2.2.1. Political participation

Following Talò and Mannarini (2015), formal political participation was assessed with three items (e.g., "Runs for public office") rated according to how each listed behavior is representative of participants' behavior ($1 = Not \ at \ all$; 5 = Totally). The items showed satisfactory internal consistency in the three samples ($\alpha_{lower,class} = 0.79$; $\alpha_{middle,class} = 0.72$; $\alpha_{upper,class} = 0.71$).

The general proneness to engage in extra-parliamentary political participation (henceforth, activism) was assessed with three items (e.g., "Participates in strikes, protests, demonstrations") retrieved from Talò and Mannarini (2015). Participants had to rate how much each behavior is representative of their behavior ($1 = Not \ at \ all$; 5 = Totally). The internal consistency of the scale was satisfactory ($\alpha_{lower,class} = 0.80$; $\alpha_{middle,class} = 0.83$; $\alpha_{upper,class} = 0.84$).

To measure individuals' political participation in legal actions as a response to dissatisfaction with the Italian socio-economic conditions, we adapted the items used by Mari et al. (2017). Two items (e.g., "I would participate in legal demonstration actions") were rated on a five-point scale (1 = *extremely unlikely*; 5 = *extremely likely*). Items were found to be reliable ($r_{s \text{ lower.class}} = 0.77$; $r_{smiddle.class} = 0.71$; $r_{supper.class} = 0.69$).

2.2.2. Social classes based on objective SES

Objective SES was computed using an index including the level of formal education achieved, income, and job qualification. Participants' education was assessed on a 6-point scale (1 = *less than high school*; 6 = *doctorate*). A 5-point scale was used to measure the net household income (1 = *less than 13.522* \in ; 5 = *more than 48,255* \in). Category labels were retrieved from the Banca D'Italia and ISTAT (2019). Finally, job prestige was assessed

using the recommendations provided by the Carlo Cattaneo Institute (Gentili, 2018). Specifically, based on the participants' job categories (e.g., employed in the private sector), we asked them to report their job qualification level (e.g., managerial, executive, or blue-collar). Educational attainment correlated with income (r = 0.21, p < 0.001) and job qualification (r = 0.33, p < 0.001); income also correlated with job qualification (r = 0.29, p <0.001). Thus, we standardized the variables and averaged them to form an overall measure of social class, as suggested by Adler et al. (2000). Following Atkinson and Brandolini (2011), we cut the distribution of the objective SES into five equal groups: the lowest 20% comprised the lower class (n = 296), the highest 20% represented the highest class (n = 284) and the middle 60% (n = 284)= 866) comprised the middle class. Chi-square tests evidenced significant and pronounced differences in education ($\chi^2_{(10)}$ = 863.95, p < 0.001, Cramer's V = 0.55), income ($\chi^2_{(8)} = 929.52, p < 0.001$) 0.001, Cramer's V = 0.57), and job qualification ($\chi^2_{(4)} = 754.19, p$ < 0.001, Cramer's V = 0.51) among the extracted social classes (see Table 1 for further details).

2.2.3. Perceived economic inequality scale

To assess perceived inequality at the national level, we adopted the 7-item questionnaire developed by Valtorta et al. (2023; see also Vezzoli et al., 2022). Some items focused mainly on the broad perception of inequality (e.g., "In Italy there are few very rich people and many very poor people"), while some others are centered on the unfairness of inequality (e.g., "It is unfair that the chances of success depend on where a person grew up"). Participants tared each statement on a 5-point scale (1 = *strongly disagree*; 5 = *strongly* agree). The results of a PCA indicated that the items compose a unifactorial structure (see Supplementary material). Further, items analysis revealed that the scale presents satisfying levels of internal consistency ($\alpha_{lower.class} = 0.87$; $\alpha_{middle.class} = 0.85$; $\alpha_{upper.class} =$ 0.87) and the Corrected-Item Total Correlations supported items coherence in assessing the construct (all correlations higher than 0.30; see Supplementary material for details). The total score was calculated by averaging the items, and higher values indicate higher perception of economic inequality at a societal level.

2.2.4. Perceived wage gap

Participants were asked to quantify the average monthly salaries (excluding taxes) of a typical Italian company's highest-ranking employee and the lowest-ranking employee. The score of perceived wage inequality was computed following Kuhn (2020) by creating a score that represents an individual's perception of inequality in market wages and mimics the Gini index (i.e., an objective indicator that measures the dispersion of income across population strata). Thirty-six participants (2%) did not answer one or both items. This low percentage of missing values can be considered inconsequential for the analysis (Dong and Peng, 2013). Thus, we imputed missing using the variable median.

2.2.5. Coronavirus personal impacts questionnaire

We used an adapted version of Conway et al. (2020) measure in order to assess how much the COVID-19 outbreak affected Italians'

		Mean (S				
Variable	Overall	Lower	Middle	Upper	Test	η^2
Impacts on finance	2.84 (1.16)	3.23 (1.05)	2.82 (1.14)	2.50 (1.19)	$F_{(2,1,443)} = 31.93^{***}$	0.04
Impacts on resource procurement	2.44 (0.97)	2.70 (0.97)	2.42 (0.95)	2.20 (1.00)	$F_{(2,1,443)} = 19.91^{***}$	0.03
Impacts on psychological health	2.72 (1.09)	2.86 (1.08)	2.71 (1.09)	2.60 (1.09)	$F_{(2,1,443)} = 4.34^*$	0.006
Perceived economic inequality	3.95 (0.71)	3.92 (0.73)	3.99 (0.68)	3.87 (0.75)	$F_{(2,1,443)} = 3.61^*$	0.005
Perceived wage gap	0.07 (0.017)	0.068 (0.018)	0.071 (0.017)	0.072 (0.019)	$F_{(2,1,443)} = 5.15^{**}$	0.007
Activism	2.31 (0.91)	2.19 (0.93)	2.32 (0.90)	2.40 (0.89)	$F_{(2,1,443)} = 3.87^*$	0.005
Formal participation	1.76 (0.88)	1.70 (0.84)	1.73 (0.86)	1.90 (0.94)	$F_{(2,1,443)} = 4.80^{**}$	0.007
Legal actions	2.67 (1.09)	2.56 (1.14)	2.62 (1.06)	2.95 (1.08)	$F_{(2,1,443)} = 12.27^{***}$	0.020
Political orientation	4.93 (1.69)	4.98 (1.60)	4.95 (1.69)	4.81 (1.81)	$F_{(2,1,443)} = 0.86$	0.001
Age	42.42 (12.87)	41.06 (13.40)	42.68 (12.42)	43.05 (13.60)		
Gender [male]	701 (48%)	128 (43%)	396 (46%)	177 (62%)		
Gender [female]	742 (51%)	167 (56%)	469 (54%)	106 (37%)		
Gender [non-binary]	3 (0.2%)	1 (0.3%)	1 (0.1%)	1 (0.4%)		

TABLE 1 Variables mean and standard deviation by social class.

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

economic status and psychological health. The scale is composed of six items that measure the financial [e.g., "The Coronavirus (COVID-19) has impacted me negatively from a financial point of view."], resource procurement [e.g., "It has been difficult for me to get the things I need due to the Coronavirus (COVID-19)."], and psychological [e.g., "I have become depressed because of the Coronavirus (COVID-19)."] impacts of the COVID-19 pandemic. The items were answered on a 5-point Likert (1 = *strongly disagree*; 5 = strongly agree). The three factors were computed by averaging the relevant items. The items related to impacts on finance (r_s lower.class = 0.76; r_s middle.class = 0.81; r_s upper.class = 0.83), resource procurement ($r_{slower.class} = 0.67$; r_s middle.class = 0.63; r_s upper.class = 0.72) and psychological health (r_s lower.class = 0.76; r_s middle.class = 0.75; r_s upper.class = 0.78) shown to be reliable.

2.2.6. Control variables: Political orientation, gender, and age

Political orientation, a control variable in the current study, was measured through a single-item measure (Kroh, 2007) rated on a nine-point scale ($1 = extreme \ left$; $9 = extreme \ right$). Finally, participants were asked to report their age in years old and to select the option that best represented their gender (1 = Male; 2 = Female; 3 = Non-binary).

2.3. Analytical strategy

In the first step, we computed descriptive statistics for each variable in the study, for both the overall sample and each social class. Of the variables that contained missing values (i.e., income, perceived wage gap, and political orientation), the percentage of missing was low (<3%), so much so that it can be considered inconsequential (Dong and Peng,

2013). We used the median as the imputation method. We checked to mean differences between social classes for continuous variables by the ANOVA one-way test. Levene's test of variances homogeneity indicated whether the robust F estimator (i.e., Welch's test) was needed. *Post-hoc* mean analyses were performed using the Bonferroni correction for pairwise comparisons.

Correlational analysis was conducted on the involved measures separately for social classes. Pearson correlation was used to measure the relationship between continuous variables, while the point-biserial correlation was used for the correlations between continuous variables and gender (i.e., nominal variable).

Ordinary Least Square regression was used to model the data. Three models, one for each social class, were built for any dependent variable (i.e., activism, political participation, and legal actions). Continuous variables were checked for normality by computing skewness and kurtosis indices. In accordance with West et al.'s (1995) recommendations, all variables were normally distributed as skewness indices were all <|2| and kurtosis indices were < [7] (see Supplementary Table 1). Assumption checks and models diagnostic (i.e., Variance Inflation Factors, tolerance and residuals plots) are reported in the Supplementary material. Variables were standardized before modeling based on the mean and standard deviation of the relevant subsample. If moderating effects appeared to be significant in the regression model, a simple slope analysis was adopted to inspect these effects further. In addition to the dependent variables reported in this manuscript (i.e., activism, legal actions, and formal participation), we had also measured illegal forms of political action (e.g., participating in unauthorized and violent demonstrations). However, the measure showed low levels of internal consistency (Spearman-Brown coefficient <0.60 in the lower and middle class) which call into question the reliability of the measure and the robustness of the analyses conducted on it. Supplementary material include

information about the measure and regression results for the sake of transparency.

3. Results

Descriptive statistics of the study variables, along with the results of the ANOVAs are reported in Table 1. Results showed that different social classes react differently in terms of political behavior (all p < 0.05), although effect sizes turned out to be generally small (0.007 $< \eta^2 < 0.02$). *Post-hoc* analysis with Bonferroni correction revealed that the lower class individuals are less politically involved than the upper class in all the facets of political actions considered (all p < 0.02; see Supplementary Table 2 for details). Differences in political actions were also found between the middle class and the upper class but only for formal political participation (p < 0.001) and legal actions (p < 0.001). In both cases, middle-class individuals show lower means than upper-class individuals.

The results indicated that individuals of different social classes had been differently impacted by COVID-19, with lower-income individuals being the most negatively affected in all the dimensions considered. While differences between classes in psychological impacts emerged to be rather small ($\eta^2 = 0.006$), financial impacts and impacts on resource procurement tended toward medium-size effects ($\eta^2 = 0.04$ and $\eta^2 = 0.03$, respectively). *Post-hoc* analysis revealed that while financial impacts and impacts on resource procurement were different across social classes (all p < 0.001), the only significant difference in psychological impacts was between the lower and upper classes. In addition, people from different social classes appear to have different perceptions of economic inequality both in terms of perceived economic inequality ($\eta^2 = 0.005$) and perceived wage gap ($\eta^2 = 0.007$), though the effects are small.

Correlations between variables separated by social class are reported in Supplementary Table 3. The different facets of political actions correlate positively (0.22 < r < 0.49), and the pattern is consistent across social classes. So, irrespective of one's social standing in society, those who participate in politics do so in various ways.

The pattern of relationships between perceived economic inequality and the facets of political actions differs among social classes. In the lower class, perceiving more economic inequality is positively associated with legal actions (r = 0.11, p = 0.050) and negatively with formal participation (r = -0.20, p = 0.001). No other significant correlations were found. In the middle class, inequality perception is negatively associated with formal political participation (r = -0.17, p < 0.001) and positively with activism (r = 0.12, p = 0.001). This positive relationship between perceived economic inequality and activism also replicates in the upper-class sample and to a greater extent (r = 0.26, p < 0.001). Like in the lower class, in the upper-class legal action is positively related to perceived inequality (r = 0.14, p = 0.022). While perceived economic inequality correlates positively with the perceived wage gap in all subsamples (0.23 < r < 0.30, p < 0.001), the correlations between perceived wage gap and the forms of political action are different from the correlations we observed for perceived inequality: In many cases, indeed, correlations between political actions and perceived wage gap are weaker in terms of effect size, or non-significant.

Personal impacts of COVID-19 show medium-to-large positive correlations with each other in all three samples (0.42 < r < 0.64, all p < 0.001). This suggests that COVID-19 consistently affected various aspects of a person's life, regardless of their class. In addition, the relationships between the impact on finances, resource procurement on the one hand, and psychological wellbeing on the other hand are stronger in the upper class (respectively, r = 0.64, p < 00.001; r = 0.51, p < 0.001) than the other two classes (0.42 < r < 0.49, all p < 0.001).

Finally, the personal impacts of COVID-19 positively correlate with political actions, in general, so those who were impacted most by COVID-19 were also more engaged in political actions. However, we can discern two major differences in the correlation pattern across social classes. First, compared to the middle and upper classes, where all correlations are statistically significant, formal political participation was the only type of political action related to the personal impacts of COVID-19 in the lower class (except for financial impacts). Second, although significant, the magnitude of the correlations was higher for the upper class (0.15 < r < 0.44, all p < 0.010) than in the middle class (0.10 < r < 0.31, all p < 0.004).

3.1. Regression general findings

Tables 2–4 report the results of the regression models on, respectively, activism, legal actions, and formal participation across social classes. A sensitivity power analysis was performed with G*Power 3.1 (Faul et al., 2009) to determine the minimum effect size detectable for each predictor. With a sample size of 284 individuals (i.e., the smallest sample size), eight predictors and three interactions, a power of 0.80, and $\alpha = 0.05$, the present sample size was adequate to detect a minimum effect of $f^2 = 0.0278$, which is considered a small-to-medium effect (Cohen, 1988).

Regarding activism (Table 2), regression results indicate that the three models explain different amounts of variance in the three sub-samples. In the lower class, the predictors explained a rather small proportion of variance ($R^2 = 0.06$, $F_{(12,283)} = 2.60$, p = 0.003). The same set of predictors explained a larger amount of variance in the middle class ($R^2 = 0.10$, $F_{(12,853)} = 8.90$, p < 0.001) and in the upper class ($R^2 = 0.22$, $F_{(12,271)} = 7.49$, p < 0.001). By inspecting the direct effect of perceived economic inequality on activism, we can observe that perceiving more inequality is positively associated with activism in the middle class ($\beta = 0.08$, t = 2.48, p = 0.014) and, to a greater extent, in the upper class ($\beta = 0.20$, t = 3.35, p = 0.001). The relationship turned out to be non-significant in the lower class ($\beta = -0.001$, t = 0.06, p = 0.973). Finally, perceiving a wider wage gap is associated with activism but the effect is negative and emerges only in the upper class ($\beta = -0.16$, t = -2.78, p = 0.006).

As of legal forms of political actions (Table 3), the results indicate that the model explains a small portion of the variance in the middle-class ($R^2 = 0.05$; $F_{(12,853)} = 4.86$, p < 0.001) and in the upper class ($R^2 = 0.11$; $F_{(12,271)} = 4.03$, p < 0.001). The model turned out to be non-significant for the lower class ($R^2 = 0.02$; $F_{(12,283)} = 1.60$, p = 0.092). Individual's perception of economic inequality is not associated with the intention to take legal action in the lower and middle socioeconomic groups ($\beta_{lower,class} = 0.10$,

TABLE 2 Regression analyses for activism by socioeconomic classes.

	Lower Class		Middle class			Upper class			
	β	95% CI	р	β	95% CI	р	β	95% CI	р
(Intercept)	0.18	0.01-0.35	0.038	0.13	0.04-0.23	0.006	0.09	-0.04-0.23	0.163
Perceived economic inequality	-0.01	-0.13-0.11	0.888	0.08	0.01-0.15	0.018	0.23	0.12-0.35	<0.001
Perceived wage gap	0.02	-0.10-0.14	0.716	0.01	-0.06-0.07	0.810	-0.16	-0.27 to-0.05	0.006
Impacts on finance	-0.07	-0.20-0.07	0.350	0.06	-0.02-0.14	0.140	0.15	0.01-0.29	0.040
Impacts on resource procurement	0.18	0.04-0.31	0.011	0.13	0.05-0.21	0.001	0.12	-0.02-0.26	0.096
Impacts on psychological health	0.001	-0.14-0.14	0.979	0.09	0.01-0.17	0.022	0.1	-0.03-0.23	0.120
Political orientation	-0.17	-0.29 to-0.05	0.004	-0.18	-0.25 to-0.11	<0.001	-0.16	-0.28 to-0.05	0.004
Gender [female]	-0.32	-0.55 to-0.09	0.007	-0.25	-0.38 to-0.12	<0.001	-0.28	-0.49 to-0.06	0.012
Gender [non-binary]	1.28	-0.69-3.25	0.203	-1.08	-2.95-0.79	0.257	-0.13	-1.90-1.64	0.884
Age	-0.07	-0.18-0.05	0.251	0.001	-0.07-0.06	0.966	0.03	-0.08-0.14	0.543
Perceived economic inequality * Impacts on finance	-0.03	-0.18-0.13	0.718	0.02	-0.07-0.10	0.663	-0.05	-0.21-0.12	0.582
Perceived economic inequality * Impacts on resource procurement	-0.09	-0.23-0.06	0.236	-0.11	-0.20 to-0.03	0.007	0.001	-0.15-0.14	0.958
Perceived economic inequality * Impacts on psychological health	-0.01	-0.17-0.14	0.852	-0.02	-0.10-0.06	0.641	0.18	0.04-0.32	0.006
Observations	296		866			284			
R2/R2 adjusted		0.099/0.061		0.111/0.099			0.249/0.216		

Significant *p* values are reported in bold.

TABLE 3 Regression analysis for legal actions by socioeconomic classes.

	Lower Class		Middle class			Upper class			
	β	95% CI	р	β	95% CI	р	β	95% CI	р
(Intercept)	0.10	-0.07-0.28	0.251	0.15	0.06-0.25	0.002	0.14	-0.00-0.28	0.057
Perceived economic inequality	0.08	-0.05-0.20	0.227	0.04	-0.03-0.11	0.269	0.13	0.01-0.26	0.037
Perceived wage gap	0.08	-0.04-0.20	0.203	0.07	-0.00-0.14	0.051	-0.07	-0.19-0.05	0.224
Impacts on finance	0.03	-0.11-0.17	0.636	0.03	-0.05-0.11	0.498	0.26	0.11-0.41	0.001
Impacts on resource procurement	0.08	-0.06-0.22	0.253	0.09	0.01-0.17	0.028	-0.04	-0.19-0.11	0.592
Impacts on psychological health	-0.01	-0.15-0.13	0.897	0.07	-0.01-0.14	0.103	0.01	-0.13-0.14	0.911
Political orientation	-0.11	-0.23-0.01	0.071	-0.09	-0.16 to-0.03	0.007	-0.04	-0.16-0.07	0.463
Gender [female]	-0.17	-0.40-0.07	0.158	-0.28	-0.42 to-0.15	<0.001	-0.38	-0.60 to-0.15	0.001
Gender [non-binary]	-1.90	-3.92-0.11	0.064	-1.34	-3.26-0.58	0.172	0.25	-1.63-2.13	0.796
Age	-0.07	-0.19-0.05	0.229	-0.05	-0.12-0.02	0.137	-0.06	-0.18-0.06	0.316
Perceived economic inequality * Impacts on finance	0.01	-0.15-0.17	0.889	0.05	-0.04-0.14	0.254	-0.12	-0.30-0.05	0.157
Perceived economic inequality * Impacts on resource procurement	-0.13	-0.28-0.01	0.075	-0.05	-0.13-0.04	0.237	0.11	-0.05-0.26	0.173
Perceived economic inequality * Impacts on psychological health	0.02	-0.14-0.18	0.797	-0.05	-0.13-0.03	0.239	0.14	-0.00-0.29	0.056
Observations		296		866			284		
R^2/R^2 adjusted	0.099/0.061		0.06 /0.048			0.147/0.112			

Significant *p* values are reported in bold.

	Lower Class		Middle class			Upper class			
	β	95% CI	р	β	95% CI	р	β	95% CI	р
(Intercept)	0.21	0.04-0.37	0.014	0.17	0.08-0.26	<0.001	0.13	-0.01-0.26	0.066
Perceived economic inequality	-0.16	-0.28 to-0.05	0.005	-0.14	-0.20 to-0.07	<0.001	0.02	-0.10-0.14	0.737
Perceived wage gap	-0.05	-0.17-0.06	0.385	-0.01	-0.08-0.05	0.726	-0.20	-0.32 to-0.09	<0.001
Impacts on finance	-0.11	-0.24-0.03	0.117	0.02	-0.06-0.09	0.631	0.04	-0.10-0.19	0.554
Impacts on resource procurement	0.28	0.15-0.41	<0.001	0.28	0.20-0.35	<0.001	0.28	0.14-0.42	<0.001
Impacts on psychological health	0.02	-0.12-0.15	0.806	0.05	-0.02-0.13	0.175	0.06	-0.07-0.19	0.403
Political orientation	-0.02	-0.13-0.09	0.768	-0.02	-0.08 - 0.04	0.540	0.02	-0.09-0.14	0.706
Gender [female]	-0.37	-0.59 to-0.15	0.001	-0.33	-0.45 to-0.21	<0.001	-0.34	-0.56 to-0.12	0.002
Gender [non-binary]	-0.86	-2.75-1.03	0.372	-0.99	-2.79-0.81	0.281	-0.90	-2.69-0.89	0.323
Age	-0.14	-0.26 to-0.03	0.012	-0.11	-0.18 to-0.05	< 0.001	-0.06	-0.17-0.05	0.310
Perceived economic inequality * Impacts on finance	0.09	-0.05-0.24	0.212	0.05	-0.03-0.13	0.207	-0.04	-0.20-0.12	0.639
Perceived economic inequality * Impacts on resource procurement	-0.15	-0.29 to-0.02	0.029	-0.13	-0.21 to-0.05	0.002	-0.05	-0.20-0.09	0.463
Perceived economic inequality * Impacts on psychological health	-0.01	-0.16-0.14	0.905	-0.04	-0.12-0.03	0.259	0.12	-0.02-0.26	0.097
Observations		296		866			284		
R^2/R^2 adjusted		0.173/0.138			0.180/0.169			0.229/0.195	

Significant *p* values are reported in bold.

Vezzoli et al.

t = 1.67, p = 0.097; $\beta_{middle.class} = 0.05$, t = 1.51, p = 0.132) but they appeared to have a significant relationship in the upper-class ($\beta = 0.13$, t = 2.10, p = 0.037). Perceiving a wider wage gap is not associated with legal action in all socioeconomic classes.

Finally, the results on formal participation (Table 4) across social classes indicate that the three models explain similar amounts of variance in the three sub-samples. The predictors explained 14% of variance of political participation in the lower class $[F_{(12,283)} = 4.93, p < 0.001]$, 17% in the middle class $[F_{(12,853)} = 15.61, p < 0.001]$, and 19% in the upper class $[F_{(12,271)} = 6.72, p < 0.001]$. Perceiving more economic inequality negatively affects individuals' political participation in the lower ($\beta = -0.18, t = -3.24, p = 0.001$) and the middle ($\beta = -0.14, t = -4.31, p < 0.001$) classes, but not in the upper class ($\beta = -0.03, t = -0.46, p = 0.651$). Conversely, perceiving a wider gap in wages negatively associates with formal participation in the upper class ($\beta = -0.20, t = -3.52, p < 0.001$), but not in the lower ($\beta = -0.03, t = -0.05, t = -0.87, p = 0.385$) and middle ($\beta = -0.01, t = -0.351, p = 0.726$) classes.

3.2. Regression moderation effects

The relationship between perceived economic inequality and activism is qualified by the impacts of COVID-19 on individuals but not consistently across social classes. Indeed, while differing levels of COVID-19 impacts do not change the relationship between perceived inequality and activism in the lower class, we found two moderating effects in the middle and upper classes. In the middle class, we found that the positive relationship between perceived inequality and activism flattens out as the COVID-19 impacts on resource procurement become harsher (Supplementary Figure 1). In a way, being hit harder by COVID-19 on the ability to procure resources silences individuals from a political standpoint. Simple slope analysis revealed that while the effect of perceived inequality on activism is statistically for lower ($\beta = 0.20, t = 3.47, p < 0.001$) and mean levels ($\beta = 0.08$, t = 2.37, p = 0.020) of the moderator, it is not for higher levels of the moderator ($\beta = -0.03$, t =-0.59, p = 0.550). Instead, we found that the positive relationship between perceived economic inequality and activism becomes stronger with the increased psychological impacts of COVID-19 on upper-class individuals (Supplementary Figure 2). This suggests being hit harder on psychological health incentives activism in individuals with higher social standing. Specifically, simple slope analysis revealed that perceived inequality is significantly related to activism for high ($\beta = 0.41$, t = 4.30, p < 0.001) and mean ($\beta =$ 0.23, t = 3.91, p < 0.001) levels of the moderator, but not for its lower levels ($\beta = 0.06, t = 0.62, p = 0.531$).

Moderation effects were also found when considering legal actions as the dependent variable. The results revealed a near-to-significance moderation of the COVID-19 impact on psychological health in the upper class ($\beta = 0.14$, t = 2.04, p = 0.056; Supplementary Figure 3). Similar to the moderating effect observed for activism in the upper class, this interaction suggests that perceiving more inequality increase the intention to take legal actions, but only for high ($\beta = 0.28$, t = 2.72, p = 0.010) and mean ($\beta = 0.13$, t = 2.10, p = 0.040) levels of the moderator.

Finally, we found moderation effects of COVID-19 impacts on resource procurement on the relationship between perceived economic inequality and formal political participation. However, this interaction effect showed up only for lower and middleclass individuals (Supplementary Figure 4). In these two groups, being hit harder by COVID-19 on the ability to obtain resources discourages individuals to participate in politics through more formal pathways. Simple slope analysis indicated that in both socioeconomic groups the effect of perceived economic inequality on political participation is significant only for average ($\beta_{lower.class}$ = -0.16, t = -2.82, p = 0.010; $\beta_{middle.class} =$ -0.14, t =-4.17, p < 0.001) and high ($\beta_{lower,class} = -0.32$, t = -3.34, $p < 0.001; \beta_{middle.class} = -0.26, t = -5.22, p < 0.001)$ levels of psychological impacts of COVID-19. The relationship turned out to be non-significant for those who were less affected on resource procurement by COVID-19. Overall, the results suggest that perceiving more economic inequality disincentivizes lower and middle-class individuals to participate formally in politics, especially for those who were hit the most on the ability to access resources by COVID-19.

4. Discussion

In this paper, we investigated how the relationships between perceived economic inequality and political actions, operationalized in three different forms, are altered by the COVID-19 consequences on individuals' finance, psychological wellbeing, and ability to procure material resources. We recruited a representative national sample of nearly 1,500 Italians and examined the moderating model in the three socioeconomic classes, which were derived from objective socioeconomic indicators (i.e., income, job qualification, and educational attainment). In general, it can be observed that the same set of variables predicts political participation in the upper class more substantially than in the lower and middle classes. In the case of participation in extra-parliamentary actions, the proportion of variance explained in the upper class is more than twice as high as in the other two social classes. In contrast, the proportions of explained variance of formal political participation are more similar among social classes. This highlights how these two conceptualizations of political participation most likely underlie different behavioral explanatory models (Ekman and Amnå, 2012).

Regarding the effect of perceived inequality, we found that perceiving a greater sense of the injustice of inequality, an aspect captured by the measure we used, makes extra-parliamentary political participation more likely. This result is in line with the Social Identity Model of Collective Action (Van Zomeren et al., 2008), which posits that perceived unfairness is one of the major drivers of political action. It is interesting to note, however, that our results indicate that this holds true for those who belong to the wealthier social classes. Societies tend to be organized as group-based social hierarchies in which some groups enjoy greater social status and power than other groups (Pratto et al., 2006). This experience may make the psychosocial path that leads to political participation in disadvantaged groups weaker compared to advantaged groups. Tracing the findings in the literature on extra-parliamentary political participation, the

10.3389/fpos.2023.990847

results show that perceiving economic inequality as problematic and unfair leads middle-class and, to a larger extent, upper-class individuals to participate more in politics through the various form of extra-parliamentary political participation considered, but not lower-class individuals, for which the effect is not significant. So, despite lower-class individuals being more adversely affected by economic inequality (Keeley, 2015), they hardly react to it even when they believe that inequality is problematic and unfair. This is in line with the predictions of the resource model, which explains socioeconomic differences in non-violent forms of political activism (Solt, 2008, 2015). Specifically, the model posits that political participation is elicited by economic inequality in the upper classes and less in the lower classes. Further, upper-class individuals might become politically active not only because they have the resources, but also because they feel they can express their concerns about problematic and unfair perceived levels of inequality. Relatedly, previous research shows that upper-class individuals often feel more politically efficacious compared to their lower-class counterparts (Cohen et al., 2001). This belief may make upper-class individuals believe to have a high impact on the society they live in and, thus, promote their political participation. The greater eagerness to act politically on the part of the upper class could also be explained by their "fear of falling," that is, the fear of losing the privileges that are associated with their achieved socioeconomic status. Research by Jetten and colleagues (Jetten et al., 2017) found that high-SES participants expressed anxiety when presented with information suggesting economic instability was high. Similarly, as economic inequality is strictly tied to economic crises (Bodea et al., 2021), perceiving higher levels of inequality might enhance their anxiety to lose their status and, thus, spur them into political participation to prevent this from happening.

When considering more formal types of political participation (e.g., running for public office), we found that lower and middle-class individuals are discouraged from engaging in this kind of political action as a consequence of perceiving more economic inequality. In contrast, the same association was found non-significant in upper-class individuals. The reverse pattern we found for formal political action might be explained by the fact that we are considering a different type of political behavior. Schäfer and Schwander (2019) found that contexts with higher inequality have significantly lower levels of political participation (e.g., voting behavior) and that political involvement declines for all income groups but particularly strongly for low-income groups. Thus, we might speculate that different theoretical models explain different forms of political participation.

In the current research, we also controlled for another facet of subjective inequality besides the PEIS, namely the perceived wage gap. Although the two measures are positively related to each other, even though moderately, which indicates some convergence in measuring the construct of interest, regression results reveal different associations between the two scales and political action across social classes. When considering activism, the effects are the opposite. While PEIS is positively associated with behavior in the middle and upper classes, the wage gap is negatively associated with the same behavior in the upper class. Tracing results from previous studies (e.g., García-Castro et al., 2022; Silagadze et al., 2022), these findings suggest how the dimensions of perceived inequality considered play a differential role on political action. In our case, wealthier individuals who perceive a larger gap between the wages of two occupations may not be spurred to take political action, possibly because of their economically priviledged situation. However, individuals in the same class who perceive economic inequality as problematic and unfair are more prone to take political action. Considering legal actions, PEIS scores associate positively with the outcome in the upper class, while the wage gap shows no association. Finally, considering formal participation, PEIS associates negatively with behavior in the lower and middle classes, whereas the wage gap is associated negatively with the same outcome in the higher class. Future research should further dissect the effects that different facets of perceived inequality may produce. Indeed, we might suspect this is not confined to political behaviors but also to other behaviors and psychological constructs (e.g., wellbeing; Vezzoli et al., 2022). By pointing to differential impacts of PEIS and perceived wage gap, our findings also contribute to the ongoing debate about the pros and cons of available tools for measuring perceptions of economic inequality (e.g., García-Castro et al., 2019; Valtorta et al., 2023).

Regarding moderation effects, we observed, in general, that greater impacts of COVID-19 at the personal level do not affect the relationship between perceived inequality and political action in the lower class. The only exception to this pattern is that, for this group of people, the harsher impact of COVID-19 on the ability to procure resources has a negative impact on the negative relationship between perceptions of inequality and formal political participation. Thus, having been more deprived makes people of this class even less likely to make their voices heard. This result appears to be in line with the predictions of the resource model (Solt, 2008, 2015), such that a lack of the ability to procure resources leads people in the lower class not to involve themselves in political action. As for middle-class people, we found that, even for this group of people, having suffered greater impacts on their ability to obtain resources due to COVID-19 has a negative impact on the relationship between perceived inequality and political participation. In particular, middle-class people most affected by COVID-19 are less likely to take political action in response to higher levels of inequality. As for the upper class, we observed that the impacts of COVID-19 on psychological wellbeing positively moderate the relationship between perceptions of inequality and political action. In other words, people of higher socioeconomic status are likely to take political action in response to perceived inequality, especially when they feel that they have been negatively affected by COVID-19 at the psychological level. Taken together, these results show that people of different socioeconomic backgrounds are influenced by different impacts of COVID-19 in the relationship between perceived inequality and individual political participation (i.e., impacts on resources in the middle class and, to some extent, in the lower class; impacts on psychological wellbeing in the upper class) and that these effects take a different direction according to socioeconomic status (i.e., negative for people in the middle and lower classes, and positive for people in the upper class). Finally, it should be pointed out that the impacts of COVID-19 on financial wellbeing do not moderate

the target relationship in any of the socioeconomic strata. However, regression analyses showed that the adverse effects of COVID-19 on financial resources directly and positively predict political actions in the upper class.

Concerning the control variables, our results generally resemble previous literature showing that more left-oriented people were more inclined to take different forms of political actions, which has been previously observed in contexts of higher inequality and higher dissatisfaction with politics (Anderson and Singer, 2008; Schäfer, 2012). Additionally, in our results we found that gender is associated with political participation, regardless of the action considered and the social class to which one belongs. We observe that, even in a time of crisis, women are less likely to act politically than men. Women have been adversely affected by the COVID-19 crisis to a greater extent than men (e.g., Czymara et al., 2021). Lockdowns, school closures, and remote work have increased the burden on women, who take on most of the additional unpaid work (e.g., Chung et al., 2021), limiting the resources needed to engage in politics. The pandemic increased the need for female voices in politics, but it did not make it more likely. The unequal loss of resources, coupled with social restrictions and pandemic containment measures may have limited women's ability to participate in politics at a time when women had more reasons to participate than ever before. These observations should be considered in the light of studies pointing to a persistent gender gap in political participation in pre-pandemic Europe (e.g., Durovic, 2019; Mari et al., 2022), even if the gap has been closing for some forms of participation (e.g., Coffé and Bolzendahl, 2010; Stolle and Hooghe, 2011).

Although this study yields interesting results regarding the influence of perceived economic inequality on individuals' political actions, operationalized in different forms, and the role of personal impacts of COVID-19 in shaping such a relationship, it is important to recognize some limitations of our research. Firstly, the correlational design of our study does not allow us to discuss causality confidently. For example, the absence of a relationship between perceived inequality and individual political behavior could be explained by a social gradient in the perception of inequality and its effects at the behavioral level. Compared to people of higher status, lower status individuals might not perceive economic inequality as problematic and unfair enough to make them act politically. Future preregistered experimental studies could investigate this pattern by experimentally manipulating status perception. Second, our way of conceptualizing and measuring the perception of inequality, which also takes into account the perception of its injustice, has been shown to be relevant to the study of political participation (see e.g., Van Zomeren et al., 2008). Having a measuring instrument like the PEIS provides a mean to explore the effects of perceived inequality and judgments of its unfairness on the consequences of such perceptions. While only a few investigations have examined the role of perceived unfairness of inequality, they agree that the perceived unfairness is a more powerful predictor of a range of consequences than the objective level of inequality (Oishi et al., 2011; Akbaş et al., 2019). However, it is not the only way to conceptualize the subjective experience of inequality. Indeed, over the years, various measures have been developed. These capture different aspects of perceived inequality, such as: the perceived wage gap (Castillo et al., 2012), which we controlled as well and proved to have differential effects, support for inequality (Wiwad et al., 2019), and perception of economic inequality in everyday life and among acquaintances (García-Castro et al., 2019).

Future studies could investigate whether and how the different ways of conceptualizing perceived inequality link to political participation. Third, our study is limited in its reliance on a representative Italian sample, and we cannot confidently generalize our results to other populations. Since institutions in different societies (e.g., political parties and systems) affect participation differently, the impacts of socioeconomic status on participation may vary from country to country (Verba et al., 1978). Despite its limitations, this study highlights how the personal consequences of COVID-19 make individuals who belong to the lower socioeconimic classes even more politically silent. This shed new insights into the understanding of political participation, especially the extra-parliamentary facets of this behavior, during a pandemic.

Data availability statement

The original contributions presented in the study are publicly available. This data can be found here: https://osf.io/udx4v/.

Ethics statement

The studies involving human participants were reviewed and approved by Commissione per la Valutazione della Ricerca del Dipartimento di Psicologia (CRIP); Department of Psychology, University of Milano-Bicocca (authorization n. RM-2020-346). The patients/participants provided their written informed consent to participate in this study.

Author contributions

Data analysis, interpretation, manuscript drafting, and revising: MV and SM. Conception and design, data collection, and approval of final version for submission: MV, SM, RV, and CV.

Funding

This research was supported by grant PRIN 2017 #2017924L2B of the Italian Ministry of University and Research (MIUR), entitled The psychology of economic inequality.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be

References

Adler, N. E., Boyce, T., Chesney, M. A., Cohen, S., Folkman, S., Kahn, R. L., et al. (1994). Socioeconomic status and health: The challenge of the gradient. *Am. Psychol.* 49, 15–24. doi: 10.1037/0003-066X.49.1.15

Adler, N. E., Epel, E. S., Castellazzo, G., and Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychol.* 19, 586. doi: 10.1037/0278-6133.19.6.586

Ahmed, N., Marriott, A., Dabi, N., Lowthers, M., Lawson, M., and Mugehera, L. (2022). *Inequality Kills*. Available online at: https://www.oxfam.org/en/research/inequality-kills

Akbaş, M., Ariely, D., and Yuksel, S. (2019). When is inequality fair? an experiment on the effect of procedural justice and agency. *J. Econ. Behav. Organ.* 161, 114–127. doi: 10.1016/j.jebo.2019.02.014

Anderson, C. J., and Singer, M. M. (2008). The sensitive left and the impervious right. multilevel models and the politics of inequality, ideology, and legitimacy in Europe. *Comp. Pol. Stud.* 41, 564–599. doi: 10.1177/0010414007313113

Atkinson, A., and Brandolini, A. (2011). On the Identification of the "middle class." ECINEQ, Society for the Study of Economic Inequality. Available online at: http://www. ecineq.org/milano/WP/ECINEQ2011-217.pdf

Banca D'Italia and ISTAT (2019). La ricchezza delle famiglie e delle società non finanziarie italiane: 2005-2017. Available online at: https://www.bancaditalia.it/pubblicazioni/ricchezza-famiglie-societa-non-fin/2017-ricchezza-famiglie-societa-non-fin/statistiche_RFSNF_09052019.pdf

Beramendi, P., and Anderson, C. J. (2008). Democracy, Inequality, and Representation in Comparative Perspective. Russell Sage Foundation.

Berardi, C., Antonini, M., Genie, M. G., Cotugno, G., Lanteri, A., Melia, A., et al. (2020). The COVID-19 pandemic in Italy: Policy and technology impact on health and non-health outcomes. *Health Pol. Tech.* 9, 454–487. doi: 10.1016/j.hlpt.2020.08.019

Berman, S. L., and Wittig, M. A. (2004). An intergroup theories approach to direct political action among African Americans. *Group Process. Intergroup Relat.* 7, 19–34. doi: 10.1177/1368430204039971

Bodea, C., Houle, C., and Kim, H. (2021). Do financial crises increase income inequality? *World Dev.* 147, 105635. doi: 10.1016/j.worlddev.2021.105635

Brady, H. E. (1999). Political Participation, In: Measures of Political Attitudes. San Diego: Academic Press, p. 737-801.

Brady, H. E. (2004). An analytical perspective on participatory inequality and income inequality. *Soc. Inequal.* 667–702. Available online at: https://www.russellsage.org/sites/all/files/u4/Brady.pdf

Brandolini, A. (2022). The COVID-19 pandemic and economic inequality in Italy. Soc. Polic. 2, 181–210. doi: 10.7389/104616

Brown-Iannuzzi, J. L., Lundberg, K. B., and McKee, S. (2017). Political action in the age of high-economic inequality: a multilevel approach. *Soc. Issues Policy Rev.* 11, 232–273. doi: 10.1111/sipr.12032

Buheji, M., da Costa Cunha, K., Beka, G., Mavri,ć, B., Leandro do Carmo de Souza, Y., Souza da Costa Silva, S., et al. (2020). The extent of COVID-19 pandemic socioeconomic impact on global poverty. a global integrative multidisciplinary review. *Am. J. Econ.* 10, 213–224. doi: 10.5923/j.economics.20201004.02

Caínzos, M., and Voces, C. (2010). Class Inequalities in political participation and the 'death of class' debate. *Int. Sociol.* 25, 383–418. doi: 10.1177/0268580909360298

Castillo, J. -C., García-Castro, J. -D., and Venegas, M. (2022). Perception of economic inequality: concepts, associated factors and prospects of a burgeoning research agenda. *Int. J. Soc. Psychol.* 37, 180–207. doi: 10.1080/02134748.2021.2009275

Castillo, J. C., Miranda, D., and Carrasco, D. (2012). Perception of economic inequality in Chile: Measurement, differences and determinants [Percepción de

evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpos.2023. 990847/full#supplementary-material

desigualdad económica en Chile: Medición, diferencias y determinantes]. *Psyke.* 2, 99–114. doi: 10.4067/S0718-22282012000100007

Cerami, C., Santi, G. C., Galandra, C., Dodich, A., Cappa, S. F., Vecchi, T., et al. (2020). Covid-19 outbreak in Italy: are we ready for the psychosocial and the economic crisis? baseline findings from the psycovid study. *Front. Psychiatry.* 11, 556. doi: 10.3389/fpsyt.2020.00556

Chung, H., Birkett, H., Forbes, S., and Seo, H. (2021). Covid-19, flexible working, and implications for gender equality in the United Kingdom. *Gend. Soc.* 35, 218–232. doi: 10.1177/08912432211001304

Coffé, H., and Bolzendahl, C. (2010). Same game, different rules? gender differences in political participation. *Sex Roles* 62, 318–333. doi: 10.1007/s11199-009-9729-y

Cohen, A., Vigoda, E., and Samorly, A. (2001). Analysis of the mediating effect of personal-psychological variables on the relationship between socioeconomic status and political participation: a structural equations framework. *Polit. Psychol.* 22, 727–757. doi: 10.1111/0162-895X.00260

Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences, 2^{nd} ed. Hillsdale, NJ: Erlbaum.

Conway, L. G., Woodard, S. R., and Zubrod, A. (2020). Social psychological measurements of COVID-19: Coronavirus Perceived Threat, Government Response, Impacts, and Experiences Questionnaires (preprint). PsyArXiv. doi:10.31234/osf.io/z2x9a

Czymara, C. S., Langenkamp, A., and Cano, T. (2021). Cause for concerns: gender inequality in experiencing the COVID-19 lockdown in Germany. *Eur. Soc.* 23, S68–S81. doi: 10.1080/14616696.2020.1808692

Davico, C., Ghiggia, A., Marcotulli, D., Ricci, F., Amianto, F., and Vitiello, B. (2021). Psychological impact of the COVID-19 pandemic on adults and their children in Italy. *Front. Psychiatry* 12, 572997. doi: 10.3389/fpsyt.2021.572997

Delhey, J., and Kohler, U. (2011). Is happiness inequality immune to income inequality? new evidence through instrument-effect-corrected standard deviations. *Soc. Sci. Res.* 40, 742–756. doi: 10.1016/j.ssresearch.2010.12.004

Dong, Y., and Peng, C. Y. J. (2013). Principled missing data methods for researchers. *Springerplus* 2, 1–17. doi: 10.1186/2193-1801-2-222

Durovic, A. (2019). The French elections of 2017: Shaking the disease?. West Eur. Polit. 42, 1487–1503. doi: 10.1080/01402382.2019.1591043

Dwyer, R. E. (2009). Making a habit of it: positional consumption, conventional action and the standard of living. *J. Consum. Cult.* 9, 328–347. doi: 10.1177/1469540509341773

Dwyer, R. E. (2018). Credit, debt, and inequality. Annu. Rev. Sociol. 44, 237–261. doi: 10.1146/annurev-soc-060116-053420

Easterbrook, M. (2021). The Social Psychology of Economic Inequality. (WIDER Working Paper No. 2021/43). World Institute for Development Economic Research. doi: 10.35188/UNU-WIDER/2021/981-5

Eisinga, R., Grotenhuis, M. T., and Pelzer, B. (2013). The reliability of a twoitem scale: pearson, cronbach, or spearman-brown?. *Int. J. Public Health* 58, 637–642. doi: 10.1007/s00038-012-0416-3

Ekman, J., and Amnå, E. (2012). Political participation and civic engagement: towards a new typology. *Hum. Aff.* 22, 283–300. doi: 10.2478/s13374-012-0024-1

Faul, F., Erdfelder, E., and Buchner, A., Lang., A.-G. (2009). Statistical power analyses using G*Power 3.1: tests for correlation and regression analyses. *Beh. Res. Meth.*, 41, 1149–1160. doi: 10.3758/BRM.41.4.1149

Gallego, A. (2007). Unequal political participation in Europe. Int. J. Sociol. 37, 10–25. doi: 10.2753/IJS0020-7659370401

García-Castro, J. D., García-Sánchez, E., Willis, G. B., Castillo, J. C., and Rodríguez-Bailón, R. (2022). Perceived economic inequality measures and their association with objective inequality and redistributive preferences. Soc. Psychol. 53, 277–291. doi: 10.1027/1864-9335/a000498

García-Castro, J. D., Willis, G. B., and Rodríguez-Bailón, R. (2019). I know people who can and who cannot: a measure of the perception of economic inequality in everyday life. *Soc. Sci. J.* 56, 599–608. doi: 10.1016/j.soscij.2018.09.008

García-Sánchez, E., Willis, G. B., Rodríguez-Bailón, R., Palacio Sañudo, J., David Polo, J., and Rentería Pérez, E. (2018). Perceptions of economic inequality and support for redistribution: The role of existential and utopian standards. *Soc. Justice. Res.* 31, 335–354. doi: 10.1007/s11211-018-0317-6

Gentili, A. (2018). Condizioni socio-economiche delle famiglie e rendimento scolastico: un'indagine sugli alunni di terza media a Bologna. Istituto Carlo Cattaneo. doi: 10.31484/2611-5778_39

Gimpelson, V., and Treisman, D. (2018). Misperceiving inequality. *Econ. Polit.* 30, 27–54. doi: 10.1111/ecpo.12103

Goldin, I., and Muggah, R. (2020). COVID-19 is increasing multiple kinds of inequality. Here's what we can do about it [WWW Document]. World Econ. Forum. Available online at: https://www.weforum.org/agenda/2020/10/covid-19-isincreasing-multiple-kinds-of-inequality-here-s-what-we-can-do-about-it/ (accessed June 30, 2022).

Goodin, R., and Dryzek, J. (1980). Rational participation: the politics of relative power. Br. J. Polit. Sci. 10, 273–292. doi: 10.1017/S0007123400002209

Gurin, P., Hatchett, S., and Jackson, J. S. (1990). Hope and Independence: Blacks' Response to Electoral and Party Politics. New York, NY: Russell Sage Foundation.

Hughes, R. (2020). Italy's Violent Protests And Social Unrest: Why Now And Who's Behind It? Fobes. Available online at: shorturl.at/tACLR

Iacoella, F., Justino, P., Martorano, B., and UNU-WIDE. (2021). Do pandemics lead to rebellion? Policy responses to COVID-19, inequality, and protests in the USA (WIDER Working Paper No. 2021), WIDER Working Paper. UNU-WIDER. doi: 10.35188/UNU-WIDER/2021/995-2

ISTA. (2021). Italy's Economic Outlook. Available online at: https://www.istat.it/en/archivio/251218

Jachimowicz, J. M., Davidai, S., Goya-Tocchetto, D., Szaszi, B., Day, M. V., Tepper, S. J., et al. (2022). Inequality in researchers' minds: Four guiding questions for studying subjective perceptions of economic inequality. J. Econ. Surv. doi: 10.1111/joes.12507

Jetten, J., Bentley, S. V., Crimston, C. R., Selvanathan, H. P., and Haslam, S. A. (2021). COVID-19 and social psychological research: a silver lining. *Asian J. Soc. Psychol.* 24, 34–36. doi: 10.1111/ajsp.12465

Jetten, J., Mols, F., Healy, N., and Spears, R. (2017). "Fear of falling": economic instability enhances collective angst among societies' wealthy class. *J. Soc. Issues* 73, 61–79. doi: 10.1111/josi.12204

Jetten, J., Reicher, S., Haslam, S. A., and Cruwys, T. (2020). *Together Apart : The Psychology of COVID-19*. SAGE Publications Ltd.

Jo, J.-I., and Choi, H. J. (2019). Enigmas of grievances about inequality: effects of attitudes toward inequality and government redistribution on protest participation. *Int. Area Stud. Rev.* 22, 348–368. doi: 10.1177/22338659198 33973

Jo, J. I. (2016). Weapons of the dissatisfied? perceptions of socioeconomic inequality, redistributive preference, and political protest: evidence from South Korea. *Int. Area Stud. Rev.* 19, 285–300. doi: 10.1177/2233865916666960

Kawachi, I., Adler, N. E., and Dow, W. H. (2010). Money, schooling, and health: mechanisms and causal evidence. *Ann. N. Y. Acad. Sci.* 1186, 56–68. doi: 10.1111/j.1749-6632.2009.05340.x

Keeley, B. (2015). Income Inequality: The Gap between Rich and Poor, OECD Insights. OECD. doi: 10.1787/9789264246010-en

Killewald, A., Pfeffer, F. T., and Schachner, J. N. (2017). Wealth inequality and accumulation. *Annu. Rev. Sociol.* 43, 379–404. doi: 10.1146/annurev-soc-060116-053331

Kraus, M. W., Piff, P. K., Mendoza-Denton, R., Rheinschmidt, M. L., and Keltner, D. (2012). Social class, solipsism, and contextualism: how the rich are different from the poor. *Psychol. Rev.* 119, 546–572. doi: 10.1037/a0028756

Kraus, M. W., and Stephens, N. M. (2012). A road map for an emerging psychology of social class: psychology of social class. *Soc. Personal. Psychol. Compass* 6, 642–656. doi: 10.1111/j.1751-9004.2012.00453.x

Kriesi, H., Grande, E., Dolezal, M., Helbling, M., Höglinger, D., Hutter, S., et al. (2012). *Political Conflict in Western Europe*. Cambridge: Cambridge University Press. doi: 10.1017/CBO9781139169219

Kroh, M. (2007). Measuring left-right political orientation: the choice of response format. *Public Opin. Q.* 71, 204–220. doi: 10.1093/poq/nfm009

Kuhn, A. (2020). The individual (mis-)perception of wage inequality: measurement, correlates and implications. *Empir. Econ.* 59, 2039–2069. doi: 10.1007/s00181-019-01722-4

Lee, H. K., and Kwon, H. Y. (2019). Perceived inequality and modes of political participation in South Korea. *Asian Educ. Dev. Stud.* 8, 282–294. doi: 10.1108/AEDS-12-2017-0129

Lukes, S. (2004). *Power: A Radical View, 2nd ed.* ed. New York, NY: Palgrave Macmillan, Houndmills, Basingstoke, Hampshire.

Manstead, A. S. R. (2018). The psychology of social class: how socioeconomic status impacts thought, feelings, and behaviour. *Br. J. Soc. Psychol.* 57, 267–291. doi: 10.1111/bjso.12251

Mari, S., Vezzoli, M., Goh, J., Khan, S., Liu, J. H., and Schumann, S. (2022). *Traditional Gender Roles and Past Voting* Likelihood: A Cross-Country Perspective. Submitted for publication.

Mari, S., Volpato, C., Papastamou, S., Chryssochoou, X., Prodromitis, G., and Pavlopoulos, V. (2017). How political orientation and vulnerability shape representations of the economic crisis in Greece and Italy. *Int. Rev. Soc. Psychol.* 30, 52–67. doi: 10.5334/irsp.95

Ministero della Salute [Ministry of Health]. (2022). COVID-19 situazione in Italia [COVID-19 - situation in Italy]. Available online at: https://rb.gy/l85uh4

Newell, J. (2013). Obama: Income Inequality Is "Defining Challenge of Our Time" - Live. The Guardian.

Ogbunu, C. B. (2020). How Social Distancing Became Social Justice [WWW Document]. Available online at: https://www.wired.com/story/opinion-how-social-distancing-became-social-justice/ (accessed June 30, 2022).

Oishi, S., Kesebir, S., and Diener, E. (2011). Income inequality and happiness. Psychol. Sci., 22, 1095–1100. doi: 10.1177/0956797611417262

Oliver, J. E. (2001). Democracy in Suburbia. Princeton University Press. doi: 10.1515/9780691223360

Page, B. I., Bartels, L. M., and Seawright, J. (2013). Democracy and the policy preferences of Wealthy Americans. *Perspect. Polit.* 11, 51–73. doi: 10.1017/S153759271200360X

Pedersen, R. T., and Mutz, D. C. (2019). Attitudes toward economic inequality: The illusory agreement. *Polit. Sci. Res. Method.* 7, 835–851. doi: 10.1017/psrm. 2018.18

Pickett, K. E., and Wilkinson, R. G. (2015). Income inequality and health: a causal review. Soc. Sci. Med. 128, 316–326. doi: 10.1016/j.socscimed.2014.12.031

Pratto, F., Sidanius, J., and Levin, S. (2006). Social dominance theory and the dynamics of intergroup relations: Taking stock and looking forward. *Euro. Review Soc. Psychol.* 17, 271–320. doi: 10.1080/10463280601055772

Rothstein, B., and Uslaner, E. M. (2005). All for all: equality, corruption, and social trust. *World Polit.* 58, 41–72. doi: 10.1353/wp.2006.0022

Sani, G., Janiri, D., Di Nicola, M., Janiri, L., Ferretti, S., and Chieffo, D. (2020). Mental health during and after the COVID-19 emergency in Italy. *Psychiatr. Clin. Neurosc.* 74, 372. doi: 10.1111/pcn.13004

Schäfer, A. (2012). Consequences of social inequality for democracy in Western Europe. Z. Vgl. Polit. Wiss. 6, 23–45. doi: 10.1007/s12286-010-0086-6

Schäfer, A., and Schwander, H. (2019). 'Don't play if you can't win': does economic inequality undermine political equality? *Eur. Polit. Sci. Rev.* 11, 395–413. doi: 10.1017/S1755773919000201

Schoene, M. (2017). Urban continent, urban activism? European cities and social movement activism. *Glob. Soc.* 31, 1–22. doi: 10.1080/13600826.2016.1203295

Sedik, T. S., and Xu, R. (2020). Vicious Cycle How Pandemics Lead to Economic Despair and Social Unrest. International Monetary Fund, S.I.

Silagadze, N., Christensen, H. S., Sirén, R., and Grönlund, K. (2022). Perceptions of inequality and political participation: the moderating role of ideology. *Pol. Stud. Rev.* doi: 10.1177/14789299221082037

Solt, F. (2008). Economic inequality and democratic political engagement. Am. J. Polit. Sci. 52, 48–60. doi: 10.1111/j.1540-5907.2007.00298.x

Solt, F. (2015). Economic inequality and nonviolent protest*: economic inequality and nonviolent protest. *Soc. Sci. Q.* 96, 1314–1327. doi: 10.1111/ssqu.12198

Starmans, C., Sheskin, M., and Bloom, P. (2017). Why people prefer unequal societies. Nat. Human Behav. 1, 1-7. doi: 10.1038/s41562-017-0082

Stolle, D., and Hooghe, M. (2011). Shifting inequalities: patterns of exclusion and inclusion in emerging forms of political participation. *Eur Soc.* 13, 119–142. doi: 10.1080/14616696.2010.523476

Talò, C., and Mannarini, T. (2015). Measuring participation: development and validation the participatory behaviors scale. *Soc. Indic. Res.* 123, 799–816. doi: 10.1007/s11205-014-0761-0

Thomas, E. F., Zubielevitch, E., Sibley, C. G., and Osborne, D. (2020). Testing the social identity model of collective action longitudinally and across structurally disadvantaged and advantaged groups. *Pers. Soc. Psychol. Bull.* 46, 823–838. doi: 10.1177/0146167219879111

Uslaner, E. M., and Brown, M. (2005). Inequality, trust, and civic engagement. Am. Polit. Res. 33, 868–894. doi: 10.1177/1532673X04271903

Valentino-De Vries, J., Lu, D., and Dance, G. C. X. (2020). *Location Data Says It All: Staying at Home During Coronavirus Is a Luxury [WWW Document]*. N. Y. Times. Available online at: https://www.nytimes.com/interactive/2020/04/03/us/coronavirus-stay-home-rich-poor.html (accessed June 30, 2022).

Valtorta, R. R., Vezzoli, M., Mari, S., Durante, F., and Volpato, C. (2023). Development and Validation of the Perceived Economic Inequality Scale (PEIS). Submitted for publication

van Wilsem, J. (2004). Criminal victimization in cross-national perspective: an analysis of rates of theft, violence and vandalism across 27 countries. *Eur. J. Criminol.* 1, 89–109. doi: 10.1177/1477370804038708

Van Zomeren, M., Postmes, T., and Spears, R. (2008). Toward an integrative social identity model of collective action: a quantitative research synthesis of three socio-psychological perspectives. *Psychol. Bull.* 134, 504. doi: 10.1037/0033-2909.134. 4.504

Verba, S., Nie, N., and Kim, J. (1978). Participation and Political Equality: A Seven Nation Comparison. New York, NY: Cambridge University Press.

Vezzoli, M., Valtorta, R. R., Mari, S., Durante, F., and Volpato, C. (2022). Effects of objective and subjective indicators of economic inequality on subjective well-being: underlying mechanisms. *J. Appl. Soc. Psych.* 53, 85–100. doi: 10.1111/jasp.12928

West, S. G., Finch, J. F., and Curran, P. J. (1995). Structural equation models with nonnormal variables: problems and remedies. In: Hoyle RH, editor. Structural equation modeling: Concepts, issues and applications. Newbery Park, CA: Sage, p. 56–75

Wilkinson, R., and Pickett, K. (2018). The Inner Level: How More Equal Societies Reduce Stress, Restore Sanity and Improve Everyone's Well-being. London: Penguin Books.

Wiwad, D., Mercier, B., Maraun, M., Robinson, A., Piff, P., Aknin, L., et al. (2019). The support for economic inequality scale: Development and adjudication. *PLoS ONE*. 14, 1–29. doi: 10.1371/journal.pone.0218685