



# Economic Inequality Perception Dampens Meritocratic Belief in China: The Mediating Role of Perceived Distributive Unfairness

## RESEARCH ARTICLE

XUELI ZHU 

LEI CHENG 

ZIFEI LI 

LIJUAN XIAO 

FANG WANG

\*Author affiliations can be found in the back matter of this article

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## ABSTRACT

In three studies, we investigated the impact of economic inequality on beliefs about meritocracy and potential mechanisms among the Chinese. Study 1 ( $N = 19,641$ ) longitudinally substantiated that beliefs about meritocracy abate in tandem with the increasing inequality perception but not objective economic inequality (Gini coefficient). Studies 2a ( $N = 140$ ) and 2b ( $N = 269$ ) experimentally showed that inequality perception decreases belief in meritocracy. The lower classes were less willing to believe in meritocracy than the upper classes when exposed to inequality cues (Studies 1 and 2b). In Study 3 ( $N = 218$ ), we again manipulated the level of economic inequality and found that laypeople construing distribution as unfair mediated the relationship between inequality perception and meritocratic belief. We highlighted that people's interpretation of economic inequality might influence their beliefs about merit.

## CORRESPONDING AUTHOR:

**Fang Wang**

Beijing Key Laboratory of Applied Experimental Psychology, National Demonstration Center for Experimental Psychology Education (Beijing Normal University), Faculty of Psychology, Beijing Normal University, CN

[fwang@bnu.edu.cn](mailto:fwang@bnu.edu.cn)

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## INTRODUCTION

‘Work hard, and you shall succeed.’

‘No pain, no gain.’

People now live in an extremely unequal world: gains are concentrated in the hands of the few, while most have seen their wealth stagnate or fall. Does economic inequality make people doubt the role of meritocratic factors in determining their position and success? So far, many scholars have noticed the potential impact of economic inequality on people’s belief in meritocracy (the belief that one’s position in society is based on merit or hard work; [Mijs, 2021](#)). However, extant studies have produced conflicting results. One body of work involved objective economic inequality (i.e., Gini coefficient), showed that economic inequality either strengthens ([Mijs, 2021](#); [Solt et al., 2016](#)) or erodes ([Newman et al., 2015](#)) or does not affect ([Morris et al., 2022](#)) residents’ belief in meritocracy. Nonetheless, other research consistently indicated that the perception of economic inequality rocks people’s belief in meritocracy ([Browman et al., 2019](#); [Davidai, 2018](#); [Kuhn, 2019](#); [Mijs & Hoy, 2021](#)). Clearly, the contradictory findings call for more investigation into the link between economic inequality and belief in meritocracy.

Regarding to the inconsistent effects of objective economic inequality on various outcomes, researchers suggest that the psychosocial effects of economic inequality depend on its perception ([Knight & Gunatilaka, 2022](#); [Willis et al., 2022](#)). Specifically, subjective inequality can address some of the shortcomings of objective measures (e.g., objective inequality may not always be perceived by individuals; [Norton & Ariely, 2011](#)) and serve as a more robust predictor of various outcomes ([Davidai, 2018](#)). In order to provide more powerful evidence, we investigated the effects of both objective and subjective economic inequality on meritocratic belief in China, where has a millennium-long Confucian tradition that advocates meritocratic values ([Bubak, 2019](#)). Furthermore, previous studies have failed to clarify the underlying mechanism and boundary conditions between economic inequality and belief in meritocracy. To fill these gaps, we proposed that the perception of distributive unfairness would explain why perceived inequality makes people lose faith in effort and in which group these associations are prominent.

### 1.1 ECONOMIC INEQUALITY AND BELIEF IN MERITOCRACY

Economic inequality, generally used to delineate the phenomenon of unbalanced income or wealth distribution in a specific society (e.g., [Payne et al., 2017](#)), has been a long-standing interest of social scientists. Apart from its impacts on social mobility and well-being or life satisfaction ([Oishi et al., 2011](#); [Vargas-Salfate et al., 2018](#)), economic inequality affects a wide range of values, attitudes, and behaviors, such as altruism, materialism,

trust, and conspicuous consumption ([Elgar, 2011](#); [Greitemeyer & Sagioglou, 2016](#); [Rözer et al., 2021](#); [Walasek & Brown, 2015](#)). For decades, the connection between economic inequality and beliefs about meritocracy has received sustained attention. Meritocracy, a widely accepted ideological belief, refers to the idea that the allocation of occupational positions and economic wealth is based primarily on merit (initiative, hard work, and ability; [Newman et al., 2015](#)) rather than class or family background ([Bubak, 2019](#)). Prescriptive meritocracy reflects the belief that outcomes in society ought to be distributed on the basis of merit ([Deutsch, 1975](#)). By contrast, descriptive meritocracy refers to the belief that meritocracy currently exists in society ([Hadarics et al., 2021](#); [Son Hing et al., 2011](#)). Meritocratic belief, especially the descriptive belief, has been overwhelmingly treated as an important framework through which Americans justify income inequality and view opportunities as equally available and outcomes as fair ([Castillo et al., 2019](#); [Hadarics et al., 2021](#); [Schneider & Castillo, 2015](#)). That is, those who firmly believe in descriptive meritocracy tend to perceive the system as equal or accept the inequality ([Larsen, 2016](#); [Roex et al., 2019](#)).

As of recently, the strikingly high and rising level of economic inequality has alarmed scholars, leading to investigations about whether exposure to societal inequality affects residents’ descriptive beliefs about the distribution justice and the opportunity structure in society ([Davidai, 2018](#); [McCall et al., 2017](#); [Solt et al., 2016](#)). However, previous studies have yielded mixed results. A line of research, using an objective indicator of economic inequality (e.g., the Gini coefficient), found that economic inequality is negatively associated with residents’ rejection of meritocracy in the United States ([Solt et al., 2016](#)) and positively associated with meritocracy belief in 23 countries ([Mijs, 2021](#)). Relatedly, in China, the increased income inequality makes residents harbor a hope that their livelihood may be improved in the future ([Cheung, 2016](#)). Of note, the results within this line are contradictory. [Newman et al. \(2015\)](#) revealed that economic inequality is positively associated with White Americans’ rejection of meritocracy, but not associated with non-White Americans’ beliefs about meritocracy. The latest evidence showcased that there is no robust relationship between local income inequality and meritocratic beliefs in England ([Morris et al., 2022](#)). By contrast, other work that focused on subjective perception of economic inequality has revealed a consistent negative association between inequality perception and belief in meritocracy. For instance, the latest compelling evidence demonstrated that perceiving income inequality as high might spark skepticism about belief in meritocracy or the opportunity to get ahead by hard work ([Browman et al., 2019](#); [Cheng & Wen, 2019](#); [Kuhn, 2019](#); [McCall et al., 2017](#); [Mijs & Hoy, 2021](#)). More precisely, people who perceive society as unequal tend to be equipped

with a weaker belief in individual or meritocratic factors being important in determining individual success or wages. Similarly, studies that explored the association between economic inequality and subjective well-being have yielded inconsistent results when using objective indicators of economic inequality (e.g., Kelley & Evans, 2017; Oishi et al., 2011). Therefore, more research is needed to clarify the effect of economic inequality by considering different aspects of it.

Lately, Wills et al. (2022), based on a thorough review, suggested that the discrepant results of economic inequality arise because the psychological effects of economic inequality are driven by its perception rather than its objective indicators (e.g., Gini coefficient; Knight & Gunatilaka, 2022; Willis et al., 2022). They proposed that the psychological effects of economic inequality mainly occur when people perceive it, and not all people perceive a given region as unequal (Willis et al., 2022). Besides, perceived economic inequality is more strongly related to many individual-level psychological outcomes (Davidai, 2018). For example, research in China indicated that perceived inequality had a greater effect on happiness than objective inequality (Knight & Gunatilaka, 2022). Therefore, we included both subjective and objective economic inequality in our analysis to fully illustrate the effect of economic inequality on meritocratic beliefs in China. In light of the contradictory effects of objective inequality, we only anticipated a negative impact of perceived inequality on meritocratic beliefs in China.

## 1.2 DISTRIBUTIVE UNFAIRNESS PERCEPTION AS A BRIDGE

Why do perceptions of inequality thwart beliefs in meritocracy? Newman et al. (2015) experientially suggested that the reason might lie in people's judgment of the distribution system, such as the (un)fairness perception of the economic system itself. Inequality is often conflated with unfairness perception (Starmans et al., 2017), yet it is unclear whether this perception can account for some of the relations between inequality perception and various psychological constructs (e.g., meritocratic belief). Here, we speculated that the perception of distributive unfairness might increase with the growing perception of inequality. In turn, people may decrease their belief in meritocratic principles when unequal distribution is perceived as unfair. Namely, perceived distributive unfairness might be an explanation of the negative relationship between economic inequality and beliefs about meritocracy.

The intricate linkage of inequality and fairness has been discussed in a plethora of studies. Scholars have proposed and confirmed that people will perceive less fairness with growing economic inequality (Brown-Iannuzzi et al., 2021; Oishi et al., 2011). Specifically, worsening economic inequality leads to a greater tendency to view political institutions, social rules, and

resource allocation as unfair (Davidai, 2018; Newman & Hayes, 2019; You & Khagram, 2005). Likewise, people who perceive more wealth inequality judge their society or unequal distribution to be less fair (e.g., Barreiro et al., 2019; Flanagan & Kornbluh, 2019; Schmalor & Heine, 2021a; Trump, 2020). Relatedly, the latest evidence suggests that being exposed to economic inequality does not activate motivated reasoning or self-reinforcing that might back up the idea that the system is fair (Trump & White, 2018; Trump, 2020). Intriguingly, there is also a possibility that the perceived fairness of resource distribution can reduce the extent to which people see their society as unequal (Rodriguez-Bailon et al., 2017). In China, individuals who experienced unfairness engendered by income inequality see the inequality is more severe (Du & King, 2022). This result further upholds a close interrelation between the two, underpinning our prediction that distributive unfairness perception is the result of people perceiving high levels of inequality.

Meritocracy, as a principle that legitimizes the unequal distribution of goods and rewards (Deutsch, 1975) or a system-supporting belief (Hadarics et al., 2021; Solt et al., 2016), has long been entangled with fairness. People who believe in meritocracy are prone to perceive the system as fair (Trump, 2020). In turn, increased fairness perception might develop or heighten beliefs in meritocracy (Chen & Zhao, 2015). Conversely, the perception of the unfairness of the distribution system may lead to people losing faith in distributive justice, that is, meritocracy. Taken together, perceived distributive unfairness might serve as a bridge between economic inequality and beliefs about meritocracy. Concretely, we postulated that a high level of economic inequality would make people perceive the distribution as unfair and then to lose faith in the meritocratic principle, namely, distributive unfairness perception as a mediation mechanism between economic inequality and belief in meritocracy.

## 1.3 SOCIOECONOMIC STATUS AS MODERATOR

As mentioned, economic inequality affects both unfairness perception and belief in meritocracy, but the strength and even direction of these effects may depend on an individual's socioeconomic status (SES; Duru-Bellat & Tenret, 2012). The literature has shown that people's SES influences the way inequality is interpreted, especially when concerning fairness perception and meritocracy (Duru-Bellat & Tenret, 2012; Solt et al., 2016; Zmerli & Castillo, 2015).

SES is the first thing to consider when studying beliefs in meritocracy (Castillo et al., 2019). The effect of SES on meritocratic belief has been, at best, divergent. For example, people who ranked themselves more highly in social class reported a greater belief that the world is meritocratic than did their lower-class counterparts (Bernardo, 2021; Kraus & Keltner, 2013; Kraus & Tan, 2015). And people in advantaged social positions are less likely to reject

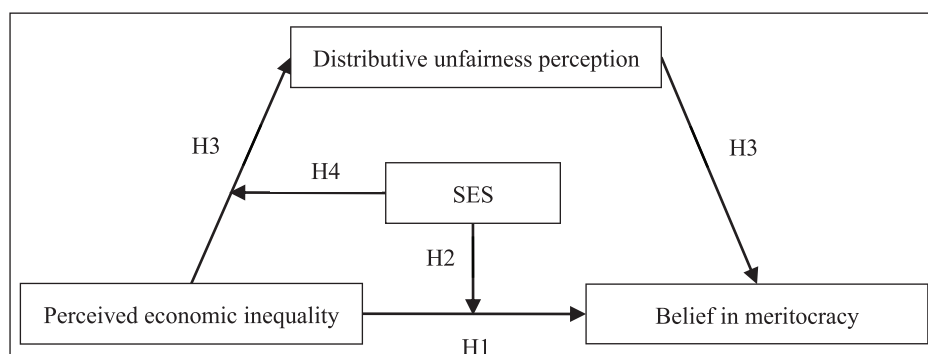
meritocracy (Bucca, 2016; Mijs & Hoy, 2021; Solt et al., 2016). They are more likely to attribute economic success to meritocratic factors and amplify the role of personal merit or hardship in their success (Phillips & Lowery, 2020). In contrast, the motivation to try hard and the significance of individual efforts for success among the lower class are generally impeded in the face of unattainable success and fierce competition in an unequal society (Laurin & Engstrom, 2020; Kraus et al., 2009; Kuhn, 2019). Accordingly, we posited that with the increasing perception of inequality, the lower class is less likely to believe in meritocratic values than their upper-class counterparts.

Additionally, SES also intertwines with individuals' perception of fairness (Davidai, 2022). The widely accepted status-legitimacy hypothesis contends that compared with the upper class, the lower class is more inclined to hold that the social system is good and fair (Brandt, 2013). However, shreds of evidence do not support this hypothesis but echo the economic self-interest hypothesis that classes hold different attitudes, values, and party preferences because they have different economic interests (Andersen & Curtis, 2015; Langsaether & Evans, 2020). The lower class tends to support redistribution because they benefit more from policies geared toward reducing inequality (Brown-Iannuzzi et al., 2015; Kulin & Svallfors, 2013). In the same vein, self-interest may drive the perception of unfairness through social status. That is, the upper class is privileged, so they tend to uphold the current social situation and conceive of society as fair (Bratanova et al., 2016; Lee et al., 2011; Ng & Allen, 2005). For example, Oishi et al. (2011) found that lower-income Americans view rising inequality as increasingly unfair, whereas their counterparts do not feel it is unfair. And the upper class believes that economic outcomes are fairer than did their lower-class counterparts (Kraus & Keltner, 2013). These findings hold true in China, where individuals with low subjective SES are less inclined to justify the system than their counterparts (Li et al., 2019, 2020). Taken together, we expect that the lower class tends to see the social system as unfair because it harmed their interests, while the upper class is less likely to consider the system as unfair since they benefit from it.

## THE CURRENT ISSUES

While efforts have been made to examine the linkage between economic inequality and meritocratic belief, several important issues are largely ignored. First, although the latest evidence concerning this topic has extended to more countries other than America (e.g., Australia, Indonesia, and Mexico; Mijs & Hoy, 2021), whether people from China consistently respond to economic inequality with weakened faith in meritocracy remains largely unknown. It is urgent to unpack the impact of economic inequality in China, which has a long Confucian tradition advocating meritocratic values but which is becoming one of the most unequal countries in the world (Chancel et al., 2022). Second, existing studies on the effect of economic inequality largely failed to reveal causality using representative longitudinal data. Besides, multilevel analysis that considered both the individual level and aggregated level data, is also needed to distinguish the effect of objective and subjective inequality (Wills et al., 2022). Lastly, previous research on subjective economic inequality and belief in meritocracy failed to identify psychological mechanisms to account for the linkage and consider the moderating effect of SES. To fill these gaps, we utilized both longitudinal and experimental methods to examine the effects of subjective economic inequality on Chinese people's meritocratic beliefs and the underlying mechanism. Specifically, we proposed that (H1) individuals are less convinced of meritocratic principles when perceiving the society as highly unequal, (H2) this effect is prominent among the lower class, (H3) perceived distributive unfairness mediates the relationship between economic inequality and belief in meritocracy, and (H4) SES also moderates the pathways from perceived economic inequality to distributive unfairness perception in the mediation model. The hypothesized moderated mediation model is presented in Figure 1.

We examined our predictions across three studies. Study 1 used a national representative panel data to longitudinally test Hypotheses 1–2. Studies 2a–2b created an imaginary society for economic inequality manipulation to test the relationship between economic inequality and meritocratic belief. Study 2b manipulated



**Figure 1** The hypothesized model.

SES to test the moderation effect of SES. Study 3 used video manipulation of economic inequality to examine the mediation of perceived distribution unfairness and moderation of SES. For all studies, we report how we determined our sample sizes, data exclusions (if any), manipulations, and all measures.

## STUDY 1

In Study 1, we longitudinally examined whether *perceived* and *objective* economic inequality will lead Chinese residents to question meritocratic values, as well as the moderation of SES. In this study, samples were recruited by a representative continuous survey project run by academic institution in mainland China.

## METHODS

### Participants and Measures

Data for this research came from the 2018 and 2020 China Family Panel Studies (CFPS; <http://csqr.cass.cn/index.jsp>). The CFPS2018 (Time 1, T1), released in June 2020, investigated 32,669 participants (age range: 9–96 years) from 31 provinces of China. The CFPS2020 (Time 2, T2), released in January 2022, investigated 28,590 participants (age range: 9–104 years) from 31 provinces of China. A total of 19,641 participants (age range: 16–95 years; 49.4% male, 50.6% female;  $M_{\text{age}} = 46.31$  years,  $SD = 16.60$ ), who completed both the CFPS2018 and CFPS2020 surveys, were used for analysis in this study.

CFPS measured individual's perceived economic inequality (i.e., 'How serious is the wealth gap in China?';  $M_{T1} = 7.17$ ,  $SD = 2.38$ ;  $M_{T2} = 6.71$ ,  $SD = 2.49$ ) on a 0 (*not serious at all*) to 10 (*very serious*) scale. Four items concerning belief in meritocracy (i.e., 'In today's society, hard work pays off', 'In today's society, talent and competence pay off', 'In today's society, there are great opportunities to improve living conditions' and 'In today's society, connections are more important than ability (reversed)';  $M_{T1} = 2.79$ ,  $SD = 0.33$ ,  $\alpha_{T1} = .34$ ;  $M_{T2} = 2.80$ ,  $SD = 0.31$ ,  $\alpha_{T2} = .35$ ) were anchored on a 1 (*strongly disagree*) to 4 (*strongly agree*) scale. Subjective SES (i.e., 'How would you rate your social status?';  $M_{T1} = 3.10$ ,  $SD = 1.07$ ;  $M_{T2} = 3.09$ ,  $SD = 1.05$ ) was assessed on a 1 (*very low*) to 5 (*very high*) scale.

Objective economic inequality metric (i.e., Gini coefficient) of the 31 provinces in 2018 were calculated based on the method introduced by Tian (2012), which has been often used to indicate the income inequality across provinces in China (Du et al., 2019). To exclude alternative explanations, we controlled provincial economic indicators (per capita gross domestic product/GDP per capita, and unemployment rate) that may affect residents' belief in meritocracy. We obtained the provincial GDP per capita and unemployment rate from the National Bureau of Statistics of China (<http://www.stats.gov.cn>). The data of 2018 were used.

## STATISTICAL ANALYSES

Six models in hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002) were run to test our research hypotheses on the association between economic inequality, SES, and belief in meritocracy. We analyzed the effect of perceived inequality in Models 1–3 and tested the effect of objective inequality in Models 4–6. In particular, in Model 1, we tested the effect of perceived economic inequality on meritocratic belief. In Model 2, we examined whether the effect of economic inequality would remain after controlling a set of provincial (i.e., GDP per capita, and unemployment rate) and sociodemographic covariates (i.e., gender, age, SES). In Model 3, we further tested the potential interactive effect of perceived economic inequality and SES on meritocratic belief after controlling other covariates. Replacing subjective inequality with objective inequality, we replicated these analyses in Models 4–6. In all models, we controlled belief in meritocracy at Time 1.

We divided participants into three SES groups based on their self-reported SES. The lower class includes people who consider their SES as very low and low, the middle class includes those who consider their SES as middle, and the upper class includes those who consider their SES as very high and high. For each of the three groups, we examined whether Time 1 economic inequality predicted Time 2 belief in meritocracy after controlling for covariates and belief in meritocracy at Time 1.

## RESULTS AND DISCUSSIONS

In Models 1 and 4, Time 1 perceived economic inequality and Time 1 Gini coefficient were entered, respectively, as the only predictor of meritocratic belief without covariates. Results showed that perceived economic inequality ( $\beta = -.05$ ,  $SE = .01$ ,  $t = -6.94$ ,  $p < .001$ ) and Gini coefficient ( $\beta = -.05$ ,  $SE = .01$ ,  $t = -3.11$ ,  $p = .005$ ) were associated with Time 2 belief in meritocracy.

We then examined the independent association between economic inequality and belief in meritocracy by controlling provincial and sociodemographic covariates. As shown in Table 1 (Models 2 and 5), the effect of Time 1 perceived economic inequality on Time 2 belief in meritocracy remained significant ( $\beta = -.04$ ,  $SE = .01$ ,  $t = -5.75$ ,  $p < .001$ ), whereas Time 1 Gini coefficient did not affect Time 2 belief in meritocracy ( $\beta = -.02$ ,  $SE = .02$ ,  $t = -0.62$ ,  $p = .539$ ).

As shown in Table 1 (Models 3 and 6), we further tested the interactive effect of economic inequality and SES on meritocratic belief. Results indicated that the interaction between Time 1 perceived economic inequality and Time 1 SES significantly predicted individuals' belief in meritocracy in Time 2 ( $\beta = .02$ ,  $SE = .01$ ,  $t = 2.63$ ,  $p = .009$ ), while the cross-level interaction effect of Time 1 Gini and Time 1 SES on Time 2 belief in meritocracy was insignificant ( $\beta = .02$ ,  $SE = .01$ ,  $t = 1.61$ ,  $p = .107$ ).



DV: TIME 2 BELIEF IN MERITOCRACY – T2BIM	MODEL 2		MODEL 3		MODEL 5		MODEL 6	
IV: TIME 1 VARIABLES	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
<b>Level 1</b>								
Perceived economic inequality – PEI	-.04	-5.75**	-.04	-5.74**	–	–	–	–
Time 1 Belief in meritocracy – T1BIM	.26	14.17**	.27	14.02**	.27	34.24**	.27	34.21**
Socioeconomic status – SES	.08	10.46**	.08	10.60**	.08	10.16**	.08	9.62**
Age – A	.03	2.36*	.03	2.44*	.03	3.20**	.03	3.22**
Sex (male = 0, female = 1) – S	.02	2.08*	.02	2.13*	.02	1.97*	.02	1.99*
<b>Interaction within Level 1</b>								
PEI $\times$ SES	–	–	.02	2.63**	–	–	–	–
<b>Level 2</b>								
Gini coefficient – GN	–	–	–	–	-.02	-0.62	-.02	-0.58
GDP per capita (thousands USD) – G	-.04	-3.54**	-.04	-5.74**	-.02	-0.85	-.02	-0.84
Unemployment rate – U	-.01	-0.45	-.01	-0.43	-.01	-0.41	-.01	-0.44
<b>Cross-level interaction</b>								
GN $\times$ SES	–	–	–	–	–	–	.02	1.61

**Table 1** Standardized coefficients of the multilevel models estimating the effects of economic inequality on the meritocratic belief.

Note: \* $p < .05$ , \*\* $p < .01$ . The multilevel regression equation for Model 1 is  $T2BIM = \beta_{00} + \beta_{10} \times PEI + [\beta_{20} \times T1BIM] + \mu + \gamma$ ; for Model 2 is  $T2BIM = \beta_{00} + \beta_{10} \times PEI + [\beta_{01} \times G + \beta_{02} \times U + \beta_{20} \times T1BIM + \beta_{30} \times SES + \beta_{40} \times A + \beta_{50} \times S] + \mu + \gamma$ ; for Model 3 is  $T2BIM = \beta_{00} + \beta_{10} \times PEI + \beta_{30} \times SES + \beta_{60} \times PEI \times SES + [\beta_{01} \times G + \beta_{02} \times U + \beta_{20} \times T1BIM + \beta_{40} \times A + \beta_{50} \times S] + \mu + \gamma$ ; for Model 4 is  $T2BIM = \beta_{00} + \beta_{01} \times GN + [\beta_{10} \times T1BIM] + \mu + \gamma$ ; for Model 5 is  $T2BIM = \beta_{00} + \beta_{01} \times GN + [\beta_{02} \times G + \beta_{03} \times U + \beta_{10} \times T1BIM + \beta_{20} \times SES + \beta_{30} \times A + \beta_{40} \times S] + \mu + \gamma$ ; for Model 6 is  $T2BIM = \beta_{00} + \beta_{01} \times GN + \beta_{21} \times GN \times SES + [\beta_{02} \times G + \beta_{03} \times U + \beta_{10} \times T1BIM + \beta_{20} \times SES + \beta_{30} \times A + \beta_{40} \times S] + \mu + \gamma$ .

We analyzed the effect of perceived economic inequality on meritocratic beliefs among different SES groups (see Table A.1 in Appendix A). In line with our hypothesis (H2), results showed that perceived economic inequality had a significant and negative impact on the belief in meritocracy among the lower class ( $\beta = -.04$ ,  $SE = .02$ ,  $t = -2.18$ ,  $p = .029$ ) and middle class ( $\beta = -.06$ ,  $SE = .01$ ,  $t = -7.58$ ,  $p < .001$ ), but no significant association was found between perceived economic inequality and belief in meritocracy among the upper class ( $\beta = -.01$ ,  $SE = .02$ ,  $t = -0.56$ ,  $p = .579$ ).

Using national representative data, Study 1 provided longitudinal evidence for the nexus between economic inequality, subjective social class and belief in meritocracy. Specifically, as expected, we initially confirmed that perception of economic inequality was associated with skepticism regarding the opportunity to get ahead based on merit in China exists. We also proved the moderating effect of SES in the Chinese population. That is, perceiving economic inequality as high greatly decreased beliefs about meritocracy among the lower and middle class than the upper class. For objective inequality, its effect on meritocratic belief muted after controlling provincial covariates. As such, this study lends more support to the observation that the effect of economic inequality on psychological outcomes depends on the perception of inequality rather than objective economic inequality (Wills et al., 2022). Based on these results, we aimed to examine causality and moderation through experiments in Study 2.

## STUDY 2A-2B

Two experiments were conducted to experimentally explore the association of perceived economic inequality and meritocratic beliefs (Study 2a) and the moderating effect of SES (Study 2b). In both studies, the perception of economic inequality was manipulated by the ‘Bimboola’ paradigm (Sánchez-Rodríguez et al., 2019), and the Descriptive Meritocracy Scale (DMS; Zimmerman & Reyna, 2013) was adapted to measure beliefs about meritocracy. We expected participants who are led to think they live in a highly unequal society would be less likely to believe in meritocracy than those who think they live in a less unequal society, and that this effect might be particularly true among the disadvantaged.

## STUDY 2A METHODS

### Participants

We recruited 140 Chinese participants (68 men and 72 women;  $M_{age} = 25.59$ ,  $SD = 8.19$ ) through the Qualtrics survey system, an online data collecting platform. Sixty-one participants were randomly assigned to the high-inequality condition, and 79 participants were assigned to the low-inequality condition. A G\*power sensitivity analysis (Faul et al., 2009) showed that the minimum effect that can be found with this sample and a statistical power of 80% ( $\alpha = .05$ ) is  $f = .38$ .

## Procedure and Measures

**Manipulating economic inequality.** Participants were randomly assigned to the two groups and asked to envision they were living in a fictitious society called Bimboola (Cheng et al., 2021; Sánchez-Rodríguez et al., 2019). In both conditions, the income of residents in Bimboola fell into three levels, and the income of the second level was identical (see Figure 1). In the high inequality condition, the income discrepancy between the first level and the third level was more salient than that in the low unequal condition. In both conditions, participants' income fell within the second income level. To deepen participants' perception of economic inequality in Bimboola and their identity with their social class, they were asked to choose two kinds of necessities that their income could afford (i.e., accommodation and transportation, see Appendix B).

Following the manipulation, participants answered an attention check item ('In Bimboola, which income level do you belong to?' The first level, the second level, or the third level) and a manipulation check item ('To what extent is Bimboola's economic distribution unequal?';  $M = 4.38$ ,  $SD = 0.96$ ) on a 1 (*not unequal at all*) to 7 (*very unequal*) scale. Participants who responded incorrectly were unable to continue answering the questionnaire.

**Belief in Meritocracy.** We adapted the 6-item Descriptive Meritocracy Scale (DMS; Zimmerman & Reyna, 2013), a brief measure of beliefs about merit. In our study, participants reported to what extent they agreed with the five descriptions about residents in Bimboola based on the information they had learned about Bimboola ( $\alpha = .76$ ; see Appendix C). For example, 'In Bimboola, people who work hard can achieve success'. The scores of the five items were recorded on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) and averaged ( $M = 4.93$ ,  $SD = 0.82$ ).

## RESULTS AND DISCUSSION

**Manipulation check.** An independent-samples  $t$  test revealed that the manipulation of economic inequality worked as intended: participants assigned to the high inequality condition ( $M = 4.60$ ,  $SD = 1.00$ ) perceived greater inequality than those in the low inequality condition ( $M = 4.20$ ,  $SD = 0.90$ ),  $t(138) = 2.51$ ,  $p = .013$ ,  $d = .42$ . No participants were excluded for incorrectly answering which income group they belonged to.

**Belief in Meritocracy.** An ANCOVA (controlling gender and age) on residents' endorsement of meritocratic principles showed a significant effect on economic inequality. Participants in the high-inequality condition reported a lower tendency to believe in meritocratic values ( $M = 4.54$ ,  $SD = 0.78$ ) than those in the low-inequality condition ( $M = 5.23$ ,  $SD = 0.72$ ),  $F(1, 136) = 26.90$ ,  $p < .001$ ,  $\eta_p^2 = .165$ . Descriptive beliefs about merit were unvaried across sex ( $F(1, 136) = 2.17$ ,  $p = .143$ ,  $\eta_p^2 = .016$ ) and age ( $F(1, 136) = 1.32$ ,  $p = .253$ ,  $\eta_p^2 = .010$ ).

This study experimentally pinpointed the negative effect of perceived economic inequality on beliefs in meritocracy. As expected, middle-class residents who think they live in a society with high economic inequality reported lower levels of meritocratic beliefs than residents who think they live in a society with low economic inequality. This result suggests that when exposed to cues of economic inequality, people are less likely to remain steadfast in their belief in the millennium-long tradition of meritocracy. However, as documented in Study 1, not everyone is skeptical of effort when encountering economic disparity. Indeed, in Study 1, the negative association between perceived economic inequality and belief in meritocracy was stronger for lower and middle-class participants than for upper class participants. Study 2b tested experimentally this moderation by SES.

## STUDY 2B METHODS

### Participants

The study employed a 2 (economic inequality: low vs. high)  $\times$  2 (SES: lower vs. upper) between-subjects design to which participants were randomly assigned. An a priori sample size analysis using G\*Power (Faul et al., 2009) showed that a minimum of 269 respondents were required to detect a medium effect size ( $f = .25$ ) for a 2  $\times$  2 ANOVA study with a power of .80 ( $\alpha = .05$ ). We recruited 299 Chinese participants through the Qualtrics survey system (140 men, 159 women;  $M_{age} = 26.55$ ,  $SD = 5.38$ ). One hundred and forty-four participants were randomly assigned to the high-inequality condition (72 to the first income level, 72 to third the third income level), while 155 participants were assigned to the low-inequality condition (72 first to the first level, 83 to the third level).

### Procedure and Measures

**Manipulating economic inequality and SES.** The procedure and materials used to manipulate economic inequality were the same as in Study 2a, with the only difference being that we manipulated socioeconomic status by changing the income level to which the participants were assigned. For the upper class, participants were told that they had found a job at the first income level and then answered the house and vehicle selection task, telling them that they could afford all the houses and vehicles. The lower class, by contrast, were told they had only found third-level jobs and could only buy third-level homes and vehicles based on their income.

After manipulation, participants were asked to answer questions concerning perceived inequality (i.e., 'How do you think the wealth gap in Bimboola?';  $M = 4.40$ ,  $SD = 1.52$ ) on a 1 (*very small*) to 7 (*very large*) scale and SES (i.e., 'What is your income level in Bimboola?') with three selections (1 = *first level*, 2 = *second level*, 3 = *third level*).

**Belief in Meritocracy.** The recognition of meritocratic values was measured by DMS ( $\alpha = .86$ ;  $M = 4.75$ ,  $SD = 1.11$ ) as in Study 2a.

## RESULTS AND DISCUSSION

**Manipulation check.** An independent-samples *t* test demonstrated that participants in the high inequality condition ( $M = 5.46, SD = 1.11$ ) perceived greater inequality than those in the low inequality condition ( $M = 3.41, SD = 1.14$ ),  $t(297) = 15.64, p < .01, d = 1.82$ . All participants correctly answered that they belonged to the first or the third income group; thus, no one was excluded.

**Belief in Meritocracy.** With gender and age controlled, we performed a 2 (economic inequality: low vs. high)  $\times$  2 (SES: low vs. high) ANOVA on participants' belief in meritocracy. Result showed two significant main effects of economic inequality ( $F_{\text{Economic inequality}} = 36.89, p < .001, \eta_p^2 = .112$ ), SES ( $F_{\text{SES}} = 7.27, p = .002, \eta_p^2 = .024$ ), and an interaction effect of economic inequality and SES ( $F_{\text{Economic inequality} \times \text{SES}} = 5.33, p = .022, \eta_p^2 = .018$ ; see Figure 2). Simple effect tests revealed that the lower class endorsed meritocracy less than the upper class in a highly unequal context ( $M_{\text{Low SES}} = 4.01, SD = 1.24$  vs.  $M_{\text{High SES}} = 4.73, SD = 1.05$ ) but not in an equal context ( $M_{\text{Low SES}} = 5.08, SD = 0.93$  vs.  $M_{\text{High SES}} = 5.10, SD = 0.86$ ). Beliefs about meritocracy were unvaried across sex ( $F(1, 293) = 0.52, p = .47, \eta_p^2 = .002$ ), but varied across age ( $F(1, 293) = 31.67, p = .253, \eta_p^2 = .102$ ).

Study 2b anchored SES to explain the divergent views on meritocracy when facing economic inequality, and our findings support our hypothesis. That is, compared to the advantaged, the disadvantaged have a lower belief in meritocracy in unequal, but not in equal, societies. Compared to the general trend given by the national data (Study 1), Studies 2a and 2b provide a more specific understanding of the Chinese people's response to economic inequality and confirm a stronger connection between inequality and meritocracy belief among lower SES participants. Apart from confirming the association from a different continent, it is urgent to explain it. A deeper reason may be that people are skeptical about the fairness of the distribution system when exposed to the wealth gap and then change their belief about economic justice that merits success. Study 3 was designed to attest to this

assumption, namely, to explore the potential psychological explanations for the linkage between economic inequality and belief in meritocracy. Additionally, as seen in Study 1 and 2b, SES is a crucial individual difference that may affect people's attitude towards inequality and their perceived unfairness of society, thus influence their beliefs about the values of meritocracy. Study 3 also tested the moderating effects of SES on the mediation model.

## STUDY 3

The prime goal of Study 3 was to test the mediating role of perceived distributive unfairness and the moderating effect of SES on this mediation model. Given that the Bimboola paradigm asks participants to imagine their lives in a hypothetical society, a more realistic context could better capture the contextual effect of economic inequality (Melita et al., 2021). Therefore, we employed a new manipulation of economic inequality (Schmalor & Heine, 2021b). In the same vein, adopting the actual SES of participants might help reveal the effect of SES. Accordingly, in this study, we employed the same method that Schmalor and Heine (2021b) used to test the interplay of economic inequality and SES. Specifically, we used videos to manipulate economic inequality and asked participants to report their SES.

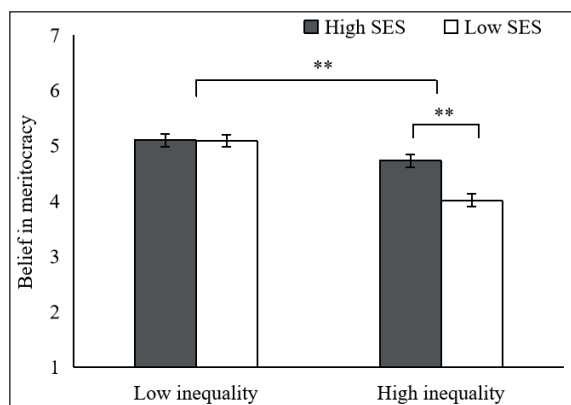
## METHODS

### Participants

The study employed a between-subjects design in which participants were randomly assigned low vs. high economic inequality conditions. We recruited 218 Chinese participants through the Qualtrics survey system (79 men, 139 women;  $M_{\text{age}} = 23.45, SD = 5.56$ ). Participants were randomly assigned to the high (102) and low (116) inequality conditions. The post hoc power analysis (Schoemann et al., 2017) indicated that the statistical power to detect this indirect effect was .77, slightly below the minimum of 80% that is often considered conventional.

### Procedure and Measures

**Manipulating economic inequality.** Participants were randomly assigned to watch one of two 1.5-min animated videos created by Schmalor and Heine (2021b; available at [https://osf.io/gnztth/?view\\_only=e0cfb2064be944cab5bba466846fafde](https://osf.io/gnztth/?view_only=e0cfb2064be944cab5bba466846fafde)). In the high inequality condition, the video stated that economic inequality in our society has increased over recent decades; in the low inequality condition, the video argued that inequality has not increased over time, because of increases in social spending over the past century. After the video, to strengthen the manipulation, we asked participants to rate the level of inequality in society (i.e., 'How do you evaluate the wealth gap in current society?'  $M = 4.80, SD = 1.82$ ) on a 1 (very small) to 7 (very large) scale.



**Figure 2** Belief in meritocracy in different conditions of economic inequality.

Note: \*\*  $p < .01$ . All error bars represent standard deviations.



**Distributive unfairness perception.** We assessed distributive unfairness perception by asking participants to answer a question (i.e., ‘How fair do you think the distribution of wealth and income is in society?’  $M = 4.18$ ,  $SD = 1.85$ ) on a 1 (completely fair) to 7 (completely unfair) scale.

**Belief in Meritocracy.** The recognition of meritocratic values was measured by the DMS ( $\alpha = .80$ ;  $M = 4.17$ ,  $SD = 1.00$ ) as in Study 2.

**SES.** The MacArthur Scale of Subjective SES (Adler et al., 2000) was used to assess the socioeconomic status on a 10-rung social status ladder (1 = the lowest, 10 = the highest;  $M = 4.36$ ,  $SD = 1.40$ ).

## RESULTS AND DISCUSSION

**Manipulation check.** An independent-samples  $t$  test demonstrated that participants in the high inequality condition ( $M = 6.09$ ,  $SD = 0.98$ ) perceived greater inequality than those in the low inequality condition ( $M = 4.07$ ,  $SD = 1.09$ ),  $t(216) = -17.13$ ,  $p < .001$ ,  $d = 1.95$ .

### Effect of economic inequality on meritocratic belief.

An ANCOVA (controlling gender and age) demonstrated that participants in the high inequality condition ( $M = 4.54$ ,  $SD = 0.78$ ) believed in meritocracy less than those in the low inequality condition ( $M = 5.23$ ,  $SD = 0.72$ ),  $F(1, 214) = 14.40$ ,  $p < .001$ ,  $\eta_p^2 = .063$ . Meritocratic belief was unvaried across sex ( $F(1, 214) = 0.01$ ,  $p = .909$ ,  $\eta_p^2 = .000$ ) and age ( $F(1, 214) = 2.94$ ,  $p = .253$ ,  $\eta_p^2 = .014$ ).

**Effect of economic inequality on distributive unfairness perception.** An ANCOVA (controlling gender and age) showed that participants in the high inequality condition perceived higher levels of unfairness ( $M = 5.16$ ,  $SD = 1.62$ ) than those in the low inequality condition ( $M = 3.07$ ,  $SD = 1.42$ ),  $F(1, 214) = 97.62$ ,  $p < .001$ ,  $\eta_p^2 = .014$ . Distributive unfairness perception were unvaried across sex ( $F(1, 214) = 0.00$ ,  $p = .977$ ,  $\eta_p^2 = .000$ ) and age ( $F(1, 214) = 1.85$ ,  $p = .176$ ,  $\eta_p^2 = .009$ ).

**Mediation.** Using PROCESS macro (model 4, Hayes, 2013), with gender and age controlled, we tested the mediation model (see Figure 3). Result showed that PEI was indirectly associated with BIM via DUP ( $b = -.12$ , 95%CI  $[-.220, -.025]$ ) with an insignificant direct effect ( $b = -.13$ ,  $p = .092$ , 95%CI  $[-.288, .022]$ ). That is, after distributive unfairness perception was included in the

regression model, it absorbed a significant part of the variance shared between perceived economic inequality and belief in meritocracy. This result supports our hypothesis 3.

**Moderated mediation.** To test the moderated mediation, we performed Model 8 in the PROCESS. Results indicated that SES did not moderate the associations that economic inequality had with distributive unfairness perception ( $b = .10$ ,  $t = 1.78$ ,  $p = .077$ , 95% CI  $[-.011, .210]$ ; see Appendix D for details) and belief in meritocracy ( $b = .12$ ,  $t = 1.84$ ,  $p = .068$ , 95% CI  $[-.009, .243]$ ).

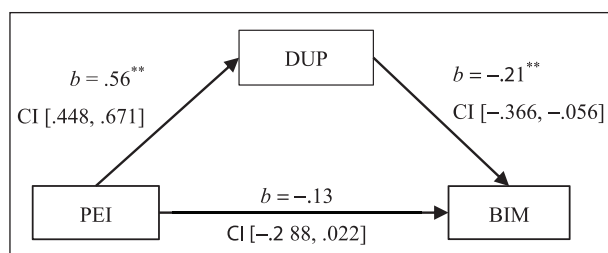
In this study, we identified the psychological processes underlying the effect of economic inequality on citizens’ belief in meritocracy. We proved that economic inequality undermines beliefs about meritocracy via the perception that the distributive system is unfair. That is, economic inequality perception fuels distributive unfairness perception, which induces distrust in meritocracy. Of great note, after adding distributive unfairness perception as a mediator, the direct effect of inequality perception on meritocratic belief became insignificant, hinting at an important role of perceived unfairness on meritocratic belief. This finding further supports that people’s response to inequality is primarily driven by fairness concerns (Ugur, 2021). Finally, we failed to prove the moderating role of SES on the direct and indirect association of perceived inequality and meritocratic belief. The moderating effects of SES might largely be attenuated because our participants were mainly from the middle and lower classes (range from 1 to 8;  $M_{SES} = 4.36$ ,  $SD = 1.40$ ).

## GENERAL DISCUSSIONS

Existing evidence on the association between economic inequality and meritocratic belief is mixed, thus calling for more systematic investigation. Through three sets of studies, the present research revealed a negative influence of the perception of prominent inequality on residents’ meritocratic beliefs and a divergent reaction of people from different classes, which supports our hypothesis. We also shed more light on a robust and consistent effect of perceived inequality, not actual inequality, on meritocracy beliefs. More importantly, in Study 3, we ascertained that the negative association between perceived economic inequality and meritocratic belief relies on the perception that the distribution system is unfair. This explanatory effect is unvaried across different SES backgrounds. Together, our explorations shed new light on how economic inequality perception shapes people’s beliefs.

## THEORETICAL AND PRACTICAL IMPLICATIONS

In this study, we utilized both longitudinal and experimental methods to examine the effects of economic inequality perception on individuals’ beliefs in meritocracy in the Chinese population. Rapid economic



**Figure 3** PEI on BIM through DUP.

Note:  $**p < .01$ . All variables were standardized. PEI = perceived economic inequality, BIM = belief in meritocracy, DUP = distributive unfairness perception, SES = socioeconomic status.

growth might feed people the illusion that they can get ahead through hard work. Nevertheless, this illusion will gradually be dispelled as people find that they are still at the bottom of the socioeconomic ladder because the wealth created always flows to the upper class. Our result suggests that the perception of economic inequality undermines Chinese citizens' meritocratic worldview. Such a result has two implications. On the one hand, in the case of economic inequality, people doubt the existence of meritocracy, which shows that people are not blind but rather are soberly aware that personal effort is not enough to change their lower-class status and society's inequality. In one sense, the suspicion of meritocracy exploded the myth of agency, turning people's attention to structural factors and an analysis of inequality from a structural lens. This diversion, to some extent, is conducive to promoting support for policies related to ameliorating current inequality and helps to stimulate the government's consideration of stratum solidification. Worryingly, on the other hand, some people may give up their efforts due to their doubt in meritocracy and instead resort to extreme or speculative ways to obtain the desired wealth, such as deviant behavior or speculation. Research has found that high economic inequality is related to many risky behaviors including robbery, burglary, and gambling (e.g., [Freund & Morris, 2006](#); [Kelly, 2000](#)). Other people may choose to muddle along, which will increase the cost of social operations and endanger social stability. For instance, unequal circumstances discourage some workers from working hard ([André, 2021](#)).

Using longitudinal survey data in Study 1, our work may help disentangle the effects of objective and perceived economic inequality ([Starmans et al., 2017](#)) and support the claim that the psychological effect of economic inequality is driven by perceived not objective inequality ([Wills et al., 2022](#)). We found that the effect of perceived economic inequality on meritocratic belief is significant in all models, while the effect of Gini coefficient fell short of statistical significance. These results, to some extent, align with the finding of [Morris et al. \(2022\)](#) that economic inequality at local level shows no meaningful association with meritocratic belief in England. Besides, prior studies showed that the negative relation between inequality and subjective well-being disappeared when several previously neglected variables (e.g., GDP per capita) were controlled for ([Kelley & Evans, 2017](#)). Through supplementary analysis (see Table A.2 in Appendix A), we found similar results that the significant negative effect of the Gini coefficient on belief in meritocracy becomes insignificant when controlling other economic growth indicators (i.e., GDP per capita and unemployment rate). This finding further underscores the importance of considering alternative explanations (e.g., economic growth) when using aggregated data ([Wills et al., 2022](#)).

Beyond showing that economic inequality dampens a belief in meritocracy, we also provide evidence of why

this effect existed. In regard to the mechanism, this study involves the complex issue of how people understand and interpret inequality. Our results suggested that individuals' meritocratic beliefs weaken when encountering an unequal context because inequality activates the perception of unfairness. Put another way, inequality is considered a violation of the justice principle, activating the perception of unfairness and thwarting beliefs in meritocracy. In addition, the distinctions and connections with 'equality', 'equity', and 'needs-based inequality' long-discussed academic topics, yet we are still unclear about them ([Deutsch, 1975](#); [Starmans et al., 2017](#)). Recently, [Schmalor and Heine \(2021a\)](#) demonstrated that people's perceptions of or beliefs about unfairness are distinct from and associated with subjective inequality. Our findings further indicated a close link between inequality perception and fairness perception, thus providing more evidence for these connections. Furthermore, both 'equality' and 'equity' serve as the basic foundations of distributive justice ([Forsé, 2009](#)), and awareness of violations of these two principles is bound to trigger rethinking about the credibility of merit-based distributive justice or meritocracy. We lend further support to the impact of perceived inequality on fairness perception and belief in meritocracy.

Of note, our findings also contribute to research on SES by confirming its effect on the pathway of economic inequality to meritocratic belief. High SES helps maintain meritocratic beliefs, despite the doubts caused by economic inequality cues. By a huge margin, the upper class is inclined to firmly maintain that effort brings success regardless of the extent of existing inequality. Based on previous studies ([Phillips & Lowery, 2020](#); [Noor et al., 2017](#)), there may be two possible explanations. On the one hand, the upper class recognizes meritocratic values because they might consider they succeed through hard work and ability, so they may be motivated to believe deeply in meritocracy, and economic inequality does not shake their beliefs. On the other hand, this result can also be interpreted as indicating that the upper class that benefited from class privileges perceived exposing their wealth as a threat. As a result, they deny that the positive results of their efforts are due to unearned privilege. Instead, they assert that their success is based on individual effort or competence and even exaggerate the difficulties faced by their group ([Phillips & Lowery, 2020](#); [Noor et al., 2017](#)) to legitimize and protect their wealth and privilege. All these responses of the upper class might hinder the promotion of policies that aim to reduce inequality.

The weakening effect of economic inequality perception on people's belief in meritocracy calls for more attention to the hidden problem of the widening wealth gap. Given that meritocratic belief constitutes an important ideology that equal opportunities exist ([Madeira et al., 2019](#)), countries must prevent widespread disbelief in it. There are several things that it should be cautious of. An incentive for people to not give up studying and working hard is to have people experience an improvement in

living standards and of their relative status or let them see the hope of a rise in class. Fairer distribution and economic policies may quickly improve citizens' sense of distribution fairness in the short term to prevent the deterioration of doubts about hard work and education. However, the promotion of meritocracy should be controlled. Both excessive dominance and rejection of meritocratic beliefs will hinder the process of eliminating economic inequality (Mijs & Savage, 2020). On the one hand, meritocracy leads to fair resource allocations, thus encouraging effort and maximizing individual output (Mijs, 2016). On the other hand, the belief in meritocracy is related to various hierarchy-legitimizing ideologies that could perpetuate inequalities (Larsen, 2016; Roex et al., 2019).

### LIMITATIONS AND FUTURE DIRECTIONS

Apart from the contributions, several limitations of our study should be noted, and multiple questions should be raised for further research. First, participants of Study 3 generally came from the middle and lower classes ( $M_{SES} = 4.36$ ,  $SD = 1.40$ ), which might weaken the effect of social class to a certain extent. Future investigations can examine this effect by recruiting participants from all walks of life and all ages. Second, the assessment of meritocratic belief mainly relies on the same self-report measurement. Moving forward, research can assess it through various measurements, such as the Perceptions That Meritocracy Exists Scale (Son Hing et al., 2011). Third, caution is needed when interpreting the results of Study 3 because the sample size is slightly underpowered for testing a moderated mediation analysis. Fourth, though our mediation model is compatible with extant theories and past research, the mediator (distributive unfairness perception) was not manipulated, leaving a possibility that our results might be influenced by an unmeasured variable. Future research would draw stronger conclusions by manipulating the mediator and considering an alternative model. Specifically, given that inequalities in earnings are regarded as fair only when they reflect differences in performance (Cappelen et al., 2019), researchers can manipulate the fairness of inequality by changing the extent to which the income is based on performance. Moreover, the perception of social mobility might be a possible mediator of the effect of economic inequality on meritocratic beliefs. Evidence indicates that although both higher perceived inequality and lower perceived mobility reduce the belief that the American economy is meritocratic, mobility tends to have a greater effect (Heiserman et al., 2020).

### CONCLUSIONS

This study proved that subjective economic inequality is a potential antecedent of the decline in meritocratic beliefs, which is prominent among the lower class. In addition,

the perception of distributive unfairness stimulated by economic inequality perception is the reason for people's rejection of meritocratic beliefs. Notably, the direct and indirect associations between inequality perception and meritocratic belief are unvaried across different SES groups. To conclude, subjective economic inequality may induce a perception of unfairness and, in turn, erode Chinese citizens' faith in merits such as effort and ability.

### DATA ACCESSIBILITY STATEMENT

All data, material and reproducible scripts for data analyses have been made publicly available via the Open Science Framework and can be accessed at [https://osf.io/gnzth/?view\\_only=e0cfb2064be944cab5bba466846fafde](https://osf.io/gnzth/?view_only=e0cfb2064be944cab5bba466846fafde). This study was not preregistered because of the challenge that the dataset used in Study 1 is pre-existing and longitudinal.

### ADDITIONAL FILE

The additional file for this article can be found as follows:

- **Appendix.** Supplementary materials. DOI: <https://doi.org/10.5334/irsp.673.s1>

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### COMPETING INTERESTS

The authors have no competing interests to declare.

### AUTHOR AFFILIATIONS

**Xueli Zhu**  [orcid.org/0000-0002-1332-5088](https://orcid.org/0000-0002-1332-5088)

Beijing normal university, CN

**Lei Cheng**  [orcid.org/0000-0002-4720-177X](https://orcid.org/0000-0002-4720-177X)

Beijing normal university, CN

**Zifei Li**  [orcid.org/0000-0002-9449-3402](https://orcid.org/0000-0002-9449-3402)

Beijing normal university, CN

**Lijuan Xiao**  [orcid.org/0000-0002-8647-8296](https://orcid.org/0000-0002-8647-8296)

Beijing normal university, CN

**Fang Wang**

Beijing Key Laboratory of Applied Experimental Psychology, National Demonstration Center for Experimental Psychology Education (Beijing Normal University), Faculty of Psychology, Beijing Normal University, CN

## REFERENCES

- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R.** (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychology*, 19, 586–592. DOI: <https://doi.org/10.1037/0278-6133.19.6.586>
- André, P.** (2021). Shallow Meritocracy: An Experiment on Fairness Views. Available at SSRN 3916303. DOI: <https://doi.org/10.2139/ssrn.3916303>
- Barreiro, A., Arsenio, W. F., & Wainryb, C.** (2019). Adolescents' conceptions of wealth and societal fairness amid extreme inequality: An Argentine sample. *Developmental Psychology*, 55(3), 498–508. DOI: <https://doi.org/10.1037/dev0000560>
- Bernardo, A. B.** (2021). Meritocracy beliefs and intolerance towards wealth inequality among higher subjective social status Filipinos. *International Journal of Social Psychology*, 36, 397–423. DOI: <https://doi.org/10.1080/02134748.2021.1940705>
- Brandt, M. J.** (2013). Do the disadvantaged legitimize the social system? A large-scale test of the status-legitimacy hypothesis. *Journal of Personality and Social Psychology*, 104(5), 765–785. DOI: <https://doi.org/10.1037/a0031751>
- Bratanova, B., Loughnan, S., Klein, O., & Wood, R.** (2016). The rich get richer, the poor get even: perceived socioeconomic position influences microsocial distributions of wealth. *Scandinavian Journal of Psychology*, 57, 243–249. DOI: <https://doi.org/10.1111/sjop.12281>
- Browman, A. S., Destin, M., Kearney, M. S., & Levine, P. B.** (2019). How economic inequality shapes mobility expectations and behaviour in disadvantaged youth. *Nature Human Behaviour*, 3(3), 214–220. DOI: <https://doi.org/10.1038/s41562-018-0523-0>
- Brown-Iannuzzi, J. L., Lundberg, K. B., & McKee, S. E.** (2021). Economic inequality and socioeconomic ranking inform attitudes toward redistribution. *Journal of Experimental Social Psychology*, 96, 10418. DOI: <https://doi.org/10.1016/j.jesp.2021.104180>
- Brown-Iannuzzi, J. L., Lundberg, K. B., Kay, A. C., & Payne, B. K.** (2015). Subjective status shapes political preferences. *Psychological science*, 26(1), 15–26. DOI: <https://doi.org/10.1177/0956797614553947>
- Bubak, O.** (2019). Perceptions of meritocracy: A note on China. *Asian Journal of Comparative Politics*, 4(2), 205789111880606. DOI: <https://doi.org/10.1177/2057891118806065>
- Bucca, M.** (2016). Merit and blame in unequal societies: Explaining Latin Americans' beliefs about wealth and poverty. *Research in Social Stratification and Mobility*, 44, 98–112. DOI: <https://doi.org/10.1016/j.rssm.2016.02.005>
- Cappelen, A. W., Mollerstrom, J., Reme, B. A., & Tungodden, B.** (2019). A meritocratic origin of egalitarian behavior. *Research Institute of Industrial Economics, Working Paper Series*, 1277. DOI: <https://doi.org/10.2139/ssrn.3381575>
- Castillo, J. C., Torres, A., Atria, J., & Maldonado, L.** (2019). Meritocracy and Economic inequality: Perceptions, preferences and implications. *Revista Internacional De Sociologia*, 77(1), e117. DOI: <https://doi.org/10.3989/ris.2019.77.1.17.114>
- Chancel, L., Piketty, T., Saez, E., Zucman, G. et al.** *World Inequality Report 2022*. World Inequality Lab.
- Chen, L. L., & Zhao, Y. F.** (2015). A study based on the Chinese distribution system: Social justice, merit principle preference and stress in low-socioeconomic-status groups. *British Journal of Education, Society and Behavioural Science*, 6(1), 40–49. DOI: <https://doi.org/10.9734/BJESBS/2015/11442>
- Cheng, L., Hao, M., & Wang, F.** (2021). Beware of the 'bad guys': Economic inequality, perceived competition, and social vigilance. *International Review of Social Psychology*, 34(1): 9, 1–12. DOI: <https://doi.org/10.5334/irsp.497>
- Cheng, S. W., & Wen, F. Q.** (2019). Americans overestimate the intergenerational persistence in income ranks. *Proceedings of the National Academy of Sciences of the United States of America*, 116(28), 13909–13914. DOI: <https://doi.org/10.1073/pnas.1814688116>
- Cheung, F.** (2016). Can income inequality be associated with positive outcomes? Hope mediates the positive inequality-happiness link in rural China. *Social Psychological and Personality Science*, 7(4), 320–330. DOI: <https://doi.org/10.1177/1948550615619762>
- Curtis, J., & Andersen, R.** (2015). How social class shapes attitudes on economic inequality: The competing forces of self-interest and legitimation. *International Review of Social Research*, 5, 4–19. DOI: <https://doi.org/10.1515/irsr-2015-0002>
- Davidai, S.** (2018). Why do Americans believe in economic mobility? Economic inequality, external attributions of wealth and poverty, and the belief in economic mobility. *Journal of Experimental Social Psychology*, 79, 138–148. DOI: <https://doi.org/10.1016/j.jesp.2018.07.012>
- Davidai, S.** (2022). How do people make sense of wealth and poverty? Personal and societal influences on attributions of economic outcomes. *Current Opinion in Psychology*, 43, 42–47. DOI: <https://doi.org/10.1016/j.copsyc.2021.06.010>
- Deutsch, M.** (1975). Equity, equality, and need: What determines which value will be used as the basis of distributive justice? *Journal of Social Issues*, 31, 137–149. DOI: <https://doi.org/10.1111/j.1540-4560.1975.tb01000.x>
- Du, H., & King, R. B.** (2022). What predicts perceived economic inequality? The roles of actual inequality, system justification, and fairness considerations. *The British Journal of Social Psychology*, 61(1), 19–36. DOI: <https://doi.org/10.1111/bjso.12468>
- Du, H., Chi, P., & King, R. B.** (2019). Economic inequality is associated with long-term harm on adolescent well-being in China. *Child Development*, 90(4), 1016–1026. DOI: <https://doi.org/10.1111/cdev.13253>



- Duru-Bellat, M., & Tenret, E.** (2012). Who's for meritocracy? Individual and contextual variations in the faith. *Comparative Education Review*, 56(2), 223–247. DOI: <https://doi.org/10.1086/661290>
- Elgar, F. J.** (2011). Income inequality, trust and homicide in 33 countries. *European Journal of Public Health*, 21(2), 241–246. DOI: <https://doi.org/10.1093/eurpub/ckq068>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G.** (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160. DOI: <https://doi.org/10.3758/BRM.41.4.1149>
- Flanagan, C. A., & Kornbluh, M.** (2019). How unequal is the United States? Adolescents' images of social stratification. *Child Development*, 90(3), 957–969. DOI: <https://doi.org/10.1111/cdev.12954>
- Forsé, M.** 2009. Macro-inequalities and micro-justice. In: Haller, M., Jowell, R., Smith, T. W. (Eds.), *The International Social Survey Programme, 1984–2009* (pp. 91–105). Routledge, London: Charting the Globe.
- Freund, E., & Morris, I.** (2006) Gambling and income inequality in the states. *Policy Studies Journal*, 34, 265–276. DOI: <https://doi.org/10.1111/j.1541-0072.2006.00169.x>
- Greitemeyer, T., & Sagioglou, C.** (2016). Subjective socioeconomic status causes aggression: A test of the theory of social deprivation. *Journal of Personality and Social Psychology*, 111(2), 178–194. DOI: <https://doi.org/10.1037/pspi0000058>
- Hadarics, M., Kende, A., & Szabó, Z. P.** (2021). The relationship between income inequality and the palliative function of meritocracy belief: The micro- and the macro-levels both count. *Frontiers in Psychology*, 12. DOI: <https://doi.org/10.3389/fpsyg.2021.709080>
- Hayes, A. F.** (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Press.
- Heiserman, N., Simpson, B., & Willer, R.** (2020). Judgments of economic fairness are based more on perceived economic mobility than perceived inequality. *Socius*, 6, 1–12. DOI: <https://doi.org/10.1177/2378023120959547>
- Kelley, J., & Evans, M. D.** (2017). Societal Inequality and individual subjective well-being: Results from 68 societies and over 200,000 individuals, 1981–2008. *Social Science Research*, 62, 1–23. DOI: <https://doi.org/10.1016/j.ssresearch.2016.04.020>
- Kelly, M.** (2000). Inequality and crime. *The Review of Economics and Statistics*, 82, 530–539. DOI: <https://doi.org/10.1162/003465300559028>
- Knight, J., & Gunatilaka, R.** (2022). Income inequality and happiness: Which inequalities matter in China? *China Economic Review*, 72, 101765. DOI: <https://doi.org/10.1016/j.chieco.2022.101765>
- Kraus, M. W., & Tan, J. J.** (2015). Americans overestimate social class mobility. *Journal of Experimental Social Psychology*, 58, 101–111. DOI: <https://doi.org/10.1016/j.jesp.2015.01.005>
- Kraus, M. W., Piff, P. K., & Keltner, D.** (2009). Social class, sense of control, and social explanation. *Journal of Personality and Social Psychology*, 97(6), 992–1004. DOI: <https://doi.org/10.1037/a0016357>
- Kraus, M. W., & Keltner, D.** (2013). Social class rank, essentialism, and punitive judgment. *Journal of Personality and Social Psychology*, 105(2), 247–261. DOI: <https://doi.org/10.1037/a0032895>
- Kuhn, A.** (2019). The subversive nature of inequality: subjective inequality perceptions and attitudes to social inequality. *European Journal of Political Economy*, 59, 331–344. DOI: <https://doi.org/10.1016/j.ejpoleco.2019.04.004>
- Kulin, J., & Svallfors, S.** (2013). Class, values, and attitudes towards redistribution: A European comparison. *European Sociological Review*, 29, 155–167. DOI: <https://doi.org/10.1093/esr/jcr046>
- Langsaether, P. E., & Evans, G.** (2020). More than self-interest: Why different classes have different attitudes to income inequality. *The British Journal of Sociology*, 71, 594–607. DOI: <https://doi.org/10.1111/1468-4446.12747>
- Larsen, C. A.** (2016). How three narratives of modernity justify economic inequality. *Acta Sociologica*, 59(2), 93–111. DOI: <https://doi.org/10.1177/0001699315622801>
- Laurin, K., & Engstrom, H. R.** (2020). The context of low socioeconomic status can undermine people's motivation for financial success. *Current Opinion in Psychology*, 33, 105–109. DOI: <https://doi.org/10.1016/j.copsyc.2019.07.016>
- Lee, I. C., Pratto, F., & Johnson, B. T.** (2011). Intergroup consensus/disagreement in support of group-based hierarchy: an examination of socio-structural and psycho-cultural factors. *Psychological Bulletin*, 137(6), 1029–1064. DOI: <https://doi.org/10.1037/a0025410>
- Li, W., Wu, J., & Kou, Y.** (2019). System justification enhances life satisfaction of high- and low-status people in China. *Social Psychological and Personality Science*, 11(5), 588596. DOI: <https://doi.org/10.1177/1948550619866182>
- Li, W., Yang, Y., Wu, J., & Kou, Y.** (2020). Testing the status-legitimacy hypothesis in China: Objective and subjective socioeconomic status sivergently predict system justification. *Personality and Social Psychology Bulletin*, 46, 1044–1058. DOI: <https://doi.org/10.1177/0146167219893997>
- Madeira, A. F., Costa-Lopes, R., Dovidio, J. F., Freitas, G., & Mascarenhas, M. F.** (2019). Primes and consequences: A systematic review of meritocracy in intergroup relations. *Frontiers in Psychology*, 10. DOI: <https://doi.org/10.3389/fpsyg.2019.02007>
- McCall, L., Burk, D., Laperrière, M., & Richeson, J. A.** (2017). Exposure to rising inequality shapes Americans' opportunity beliefs and policy support. *Proceedings of the National Academy of Sciences*, 114(36), 9593–9598. DOI: <https://doi.org/10.1073/pnas.1706253114>
- Melita, D., Willis, G. B., & Rodríguez-Bailón, R.** (2021). Economic inequality increases status anxiety Through



- Perceived Contextual Competitiveness. *Frontiers in Psychology*, 12, 1–9. DOI: <https://doi.org/10.3389/fpsyg.2021.637365>
- Mijs, J. J.** (2016). The unfulfillable promise of meritocracy: Three lessons and their implications for justice in education. *Social Justice Research*, 29, 14–34. DOI: <https://doi.org/10.1007/s11211-014-0228-0>
- Mijs, J. J. B.** (2021). The paradox of inequality: Income inequality and belief in meritocracy go hand in hand. *Socio-Economic Review*, 19(1), 7–35. DOI: <https://doi.org/10.1093/ser/mwy051>
- Mijs, J. J. B., & Hoy, C.** (2021). How information about inequality impacts belief in meritocracy: Evidence from a randomized survey experiment in Australia, Indonesia and Mexico. *Social Problems*, 1–32. DOI: <https://doi.org/10.1093/socpro/spaa059>
- Mijs, J. J. B., & Savage, M.** (2020). Meritocracy, elitism and inequality. *The Political Quarterly*, 91(2), 397–404. DOI: <https://doi.org/10.1111/1467-923X.12828>
- Morris, K., Bühlmann, F., Sommet, N., & Vandecasteele, L.** (2022). The paradox of local inequality: Meritocratic beliefs in unequal localities. *The British Journal of Sociology*, 73(2), 421–460. DOI: <https://doi.org/10.1111/1468-4446.12930>
- Newman, B., & Hayes, T.** (2019). Durable democracy? Economic inequality and democratic accountability in the new gilded age. *Political Behavior*, 41(1), 5–30. DOI: <https://doi.org/10.1007/s11109-017-9435-3>
- Newman, B. J., Johnston, C. D., & Lown, P. L.** (2015). False consciousness or class awareness? Local income inequality, personal economic position, and belief in American meritocracy. *American Journal of Political Science*, 59(2), 326–340. DOI: <https://doi.org/10.1111/ajps.12153>
- Ng, S. H., & Allen, M. W.** (2005). Perception of economic distributive justice: Exploring leading theories. *Social Behavior and Personality*, 33(5), 435–454. DOI: <https://doi.org/10.2224/sbp.2005.33.5.435>
- Noor, M., Vollhardt, J. R., Mari, S., & Nadler, A.** (2017). The social psychology of collective victimhood: collective victimhood. *European Journal of Social Psychology*, 47(2), 121–134. DOI: <https://doi.org/10.1002/ejsp.2300>
- Norton, M. I., & Arieli, D.** (2011). Building a better America—One wealth quintile at a time. *Perspectives on Psychological Science*, 6, 9–12. DOI: <https://doi.org/10.1177/1745691610393524>
- Oishi, S., Kesebir, S., & Diener, E.** (2011). Income inequality and happiness. *Psychological Science*, 22(9), 1095–1111. DOI: <https://doi.org/10.1177/0956797611417262>
- Payne, B. K., Brown-Iannuzzi, J. L., & Hannay, J. W.** (2017). Economic inequality increases risk taking. *Proceedings of the National Academy of Sciences*, 114(18), 4643–4648. DOI: <https://doi.org/10.1073/pnas.1616453114>
- Phillips, L. T., & Lowery, B. S.** (2020). I ain't no fortunate one: On the motivated denial of class privilege. *Journal of Personality and Social Psychology*, 119(6), 1403–1422. DOI: <https://doi.org/10.1037/pspi0000240>
- Raudenbush, S. W., & Bryk, A. S.** (2002). *Hierarchical linear models: Applications and data analysis methods*. Thousand Oaks, CA: Sage.
- Rodriguez-Bailon, R., Bratanova, B., Willis, G. B., Lopez-Rodriguez, L., Sturrock, A., & Loughnan, S.** (2017). Social class and ideologies of inequality: How they uphold unequal societies. *Journal of Social Issues*, 73(1), 99–116. DOI: <https://doi.org/10.1111/josi.12206>
- Roex, K. L., Huijts, T., & Sieben, I.** (2019). Attitudes towards income inequality: 'Winners' versus 'losers' of the perceived meritocracy. *Acta Sociologica*, 62(1), 47–63. DOI: <https://doi.org/10.1177/0001699317748340>
- Rözer, J., Lancee, B., & Volker, B.** (2021). Keeping up or giving up? Income inequality and materialism in Europe and the United States. *Social Indicators Research*, 159, 647–666. DOI: <https://doi.org/10.1007/s11205-021-02760-1>
- Sánchez-Rodríguez, Á., Willis, G. B., Jetten, J., & Rodríguez-Bailón, R.** (2019). Economic inequality enhances inferences that the normative climate is individualistic and competitive. *European Journal of Social Psychology*, 6, 1114–1127. DOI: <https://doi.org/10.1002/ejsp.2557>
- Schmalor, A., & Heine, S. J.** (2021a). The construct of subjective economic inequality. *Social Psychological and Personality Science*, 227, 194855062199686.
- Schmalor, A., & Heine, S. J.** (2021b). Subjective economic inequality decreases emotional intelligence, especially for people of high social class. *Social Psychological and Personality Science*, 19485506211024. DOI: <https://doi.org/10.1177/19485506211024024>
- Schneider, S. M., & Castillo, J. C.** (2015). Poverty attributions and the perceived justice of income inequality: A comparison of East and West Germany. *Social Psychology Quarterly*, 78(3), 263–282. DOI: <https://doi.org/10.1177/0190272515589298>
- Schoemann, A. M., Boulton, A. J., & Short, S. D.** (2017). Determining power and sample size for simple and complex mediation models. *Social Psychological and Personality Science*, 8, 379–386. DOI: <https://doi.org/10.1177/1948550617715068>
- Solt, F., Hu, Y., Hudson, K., Song, J., & Yu, D.** “Erico.” (2016). Economic inequality and belief in meritocracy in the United States. *Research and Politics*, 3(4), 1–7. DOI: <https://doi.org/10.1177/2053168016672101>
- Son Hing, L. S., Bobocel, D. R., Zanna, M. P., Garcia, D. M., Gee, S., & Oraziotti, K.** (2011). The merit of meritocracy. *Journal of Personality and Social Psychology*, 101(3), 433–450. DOI: <https://doi.org/10.1037/a0024618>
- Starmans, C., Sheskin, M., & Bloom, P.** (2017). *Why people prefer unequal societies*. *Nature Human Behaviour*, 1(4), 0082. DOI: <https://doi.org/10.1038/s41562-017-0082>
- Tian, W.** (2012). The trend of the Gini index: Calculation based on province-level household income (in Chinese). *Economic Science*, 2, 48–59.
- Trump, K. S., & White, A. R.** (2018). Does inequality beget inequality? Experimental tests of the prediction that inequality increases system justification motivation.

*Journal of Experimental Political Science*, 5(3), 206–216.  
DOI: <https://doi.org/10.1017/XPS.2018.2>

**Trump, K. S.** (2020). When and why is economic inequality seen as fair. *Current Opinion in Behavioral Sciences*, 34, 46–51.  
DOI: <https://doi.org/10.1016/j.cobeha.2019.12.001>

**Ugur, Z. B.** (2021). How does Inequality Hamper Subjective Well-being? The Role of Fairness. *Social Indicators Research*, 158, 377–407. DOI: <https://doi.org/10.1007/s11205-021-02711-w>

**Vargas-Salfate, S., Paez, D., Khan, S. S., Liu, J. H., & Gil de Zúñiga, H.** (2018). System justification enhances well-being: A longitudinal analysis of the palliative function of system justification in 18 countries. *British Journal of Social Psychology*, 57, 567–590. DOI: <https://doi.org/10.1111/bjso.12254>

**Walasek, L., & Brown, G. D.** (2015). Income inequality and status seeking: Searching for positional goods in unequal US States. *Psychological Science*, 26(4), 527–533. DOI: <https://doi.org/10.1177/0956797614567511>

**Willis, G. B., García-Sánchez, E., Sánchez-Rodríguez, Á., García-Castro, J. D., & Rodríguez-Bailón, R.** (2022). The psychosocial effects of economic inequality depend on its perception. *Nature Reviews Psychology*, 1, 301–309. DOI: <https://doi.org/10.1038/s44159-022-00044-0>

**You, J., & Khagram, S.** (2005). A comparative study of inequality and corruption. *American Sociological Review*, 70(1), 136–157. DOI: <https://doi.org/10.1177/000312240507000107>

**Zimmerman, J. L., & Reyna, C.** (2013). The meaning and role of ideology in system justification and resistance for high- and low-status people. *Journal of Personality and Social Psychology*, 105(1), 1–23. DOI: <https://doi.org/10.1037/a0032967>

**Zmerli, S., & Castillo, J. C.** (2015). Income inequality, distributive fairness and political trust in Latin America. *Social Science Research*, 52, 179–192. DOI: <https://doi.org/10.1016/j.ssresearch.2015.02.003>

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