**Opposing Effects of Economic Inequality Concentrated at the Top or Bottom of the Income
Distribution on Subjective Well-Being**

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Instructions for download of datasets and scripts to reproduce our analyses are available on the OSF at the following link: https://osf.io/rfu6c/?view_only=5ff256899c9c4da99a55427e0b916fd3

Abstract

Prior studies commonly conceptualize economic inequality as income dispersion, predominantly operationalize it through the Gini coefficient—and find inconsistent results for the relationship to subjective well-being. We draw on prior research highlighting that two income distributions can have the same Gini coefficient but differ in where inequality is concentrated, and suggest that bottom-concentrated economic inequality (i.e., the ratio of the 50th to the 10th income percentile) and top-concentrated economic inequality (i.e., the ratio of the 95th to the 50th income percentile) have *opposing* effects on subjective well-being. We provide empirical support using zip-code level income ratios extracted from the American Community Survey matched to individual-level subjective well-being from the Gallup U.S. Poll ($N = 573,025$), which also reveals that these opposing effects are stronger for higher- than lower-income individuals. Where inequality is concentrated is thus crucial to understanding how economic inequality predicts subjective well-being and other outcomes of societal importance.

Keywords: economic inequality, well-being, income

The gap between the rich and poor in the United States is at high levels. According to 2015 data, the top 1% of U.S. families earn 26.3 times more than the bottom 99% combined (Economic Policy Institute, 2018). As a result, more than half of Americans have identified the reduction of economic inequality as a top priority for the government to improve the lives of future generations (Kim, Rich, & Horowitz, 2019), prompting research to increasingly turn towards exploring if and how economic inequality is associated with societal outcomes that warrant such action (Kirsch, Love, Radler, & Ryff, 2019).

One prominent line of research has focused on how economic inequality affects people's subjective well-being, an important goal of public policy (Frijters, Clark, Krekel, & Layard, 2019). Interestingly, prior studies testing the relationship between economic inequality and subjective well-being have found mixed results, with some finding a negative association (e.g., Oishi & Kesebir, 2015; Oishi, Kesebir, & Diener, 2011) and others a positive association (e.g., Cheung, 2016; Ifcher, Zarghamee, & Graham, 2019). Indeed, a recent meta-analysis of 39 studies testing the relationship between economic inequality and subjective well-being found an effect that was statistically indistinguishable from zero (Ngamaba, Panagioti, & Armitage, 2018). Despite the attention given to this topic, it is thus unclear if and for whom economic inequality affects subjective well-being.

In the current research, we propose that the mixed results linking economic inequality and subjective well-being can be explained in part by how economic inequality is conceptualized and operationalized in prior work. Consider that previous research defines economic inequality as “the variance in an income distribution” (Payne, Brown-Iannuzzi, & Hannay, 2017, p. 4643), and is most commonly measured through the Gini coefficient (Ngamaba, Panagioti, & Armitage, 2018). This measure is calculated as double the area between the line of perfect equality and the

Lorenz curve, which plots on the x-axis the percentiles of the population according to income, and on the y-axis the cumulative income.

But the Gini coefficient's focus on income dispersion is inattentive to the shape of the income distribution (De Maio, 2007), i.e., whether income dispersion is concentrated at the bottom or at the top of the income distribution (Liu & Gastwirth, 2020), which we propose is crucial to understanding its effects on subjective well-being. For example, consider that two income distributions can have the same Gini coefficient but economic inequality can be concentrated in either the gap between the bottom of the income distribution and the median, or the gap between the top of the income distribution and the median (see Figure 1). That is, we suggest that *bottom-concentrated* economic inequality is more attuned to measure the distance between poor and median earners (i.e., also distinguishing it from poverty, which reflects absolute income levels of those at the bottom of the income distribution), while *top-concentrated* economic inequality is more attuned to measure the distance between median and top earners (i.e., also distinguishing it from affluence).

Figure 1**Two Fictional Areas with the Same Gini and Different Sources of Economic Inequality**

Note. Both income distributions have the same Gini coefficient of .44, equivalent to the mean in our U.S. dataset described below. Panel A depicts economic inequality concentrated in the difference between the bottom of the income distribution and the middle; Panel B depicts economic inequality concentrated in the difference between the top of the income distribution and the middle. Panel C depicts both income distributions as Lorenz curves. The shaded area from both distributions are the same, which shows that these distributions have the same Gini coefficients, but differ in where economic inequality is concentrated.

We draw on prior research to suggest that economic inequality concentrated at the top or at the bottom of the income distribution have opposing effects on subjective well-being, as follows.

Bottom-Concentrated Economic Inequality. We predict that economic inequality concentrated in the gap between low-income and median earners is associated with lower subjective well-being. According to John Rawls' theory of justice—also known as the maximin model—people are particularly sensitive to maximizing the welfare of the least well-off (Rawls, 1971). In line with this principle, subsequent empirical research has found that people make allocation judgements on income distributions based on how the poorest fare both in absolute terms and relative to others (Mitchell, Tetlock, Mellers, & Ordóñez, 1993). Indeed, studies have found that people are concerned with ensuring the “social minimum,” or the minimum level of necessary social goods for the poorest in the income distribution (Michelbach, Scott, Matland, & Bornstein, 2003), and only consider incomes to be fair when they are above a minimum welfare (Alves & Rossi, 1978). Notably, individuals assess the level of social minimum by comparing the earnings of those by the bottom of the income distribution to the earnings of the average individual in the society (Frohlich, Oppenheimer, & Eavey, 1987). Therefore, we predict:

Hypothesis 1. Higher bottom-concentrated economic inequality is associated with lower levels of subjective well-being.

Top-Concentrated Economic Inequality. In contrast, we propose that economic inequality concentrated in the gap between median and high-income earners is perceived as an economic system that rewards merit and is consequently associated with higher subjective well-being. Tournament theory suggests that people are more motivated to climb up the income ranks when payoffs to advance are higher (Connelly, Tihanyi, Crook, & Gangloff, 2014). In line with

this perspective, prior research has shown that people are more likely to tolerate and even justify (high) economic inequality when there is upward mobility (Benabou & Ok, 2001), particularly if a higher income rank is attainable through effort, skill, and determination, rather than luck (Davidai, 2018; Kraus, Piff, & Keltner, 2009). Given widespread inflated views of people's own ability to move up the income ladder (Alesina, Stantcheva, & Teso, 2018; Davidai & Gilovich, 2018), income distributions where economic inequality is concentrated at the top may connote greater payoffs that are perceived to be obtainable through merit, with positive implications for subjective well-being (Shaw, 2014). Therefore, we predict:

Hypothesis 2. Higher top-concentrated economic inequality is associated with higher levels of well-being.

We test our predictions through a combination of unique datasets. First, we draw on the American Community Survey (ACS) and utilize a novel empirical approach to calculate income ratios at the zip-code level using tract-level information, described below. Second, we access information from the Gallup U.S. Poll, a large-scale survey dataset ($N=573,025$), which contains individual-level subjective well-being measurements with zip-code level identifiers. Third, we utilize a rich set of control variables that account for known covariates of the relationship between economic inequality and subjective well-being at both the zip-code level from the American Community Survey and at the individual-level from the Gallup survey (to reproduce our results, see: https://osf.io/rfu6c/?view_only=5ff256899c9c4da99a55427e0b916fd3).

Study

Participants

We excluded participants from Puerto Rico, the U.S. Virgin Islands, Guam, and the District of Columbia because data from these U.S. territories were missing from the ACS. The

final dataset of individual-level subjective well-being responses from the U.S. Gallup Poll was comprised of 573,025 respondents; 51.51% self-identified as Female; 17.27% self-identified as non-white; with a mean age of 53.10 years ($SD = 18.49$, range: 18-100 years).

Measures

Independent Variable: Economic Inequality Ratios. We calculated the 50-10 economic inequality ratio for each zip code (i.e., the ratio of the 50th percentile relative to the 10th percentile) as a measure of *bottom-concentrated economic inequality*, and 95-50 economic inequality ratio for each zip code (i.e., the ratio of the 95th percentile relative to the 50th percentile) as a measure of *top-concentrated economic inequality*.

To calculate these economic inequality ratios, we first estimated the 10th and 50th percentiles for each zip code from the ACS by converting each tract to zip code and aggregating the dataset by zip code. Next, we estimated each percentile by summing all individuals in all income brackets and noted the midpoint of the income bracket that each percentile falls into for each zip code. Prior research exploring the relationship between income and subjective well-being (Cheung & Lucas, 2016) used a similar method to estimate the income of participants. For the 95th percentile, we used the estimated mean income for the 95th percentile from the ACS at the zip-code level. After calculating each ratio, we winsorized them to account for extreme values and then log-transformed them. Finally, we standardized these ratios before conducting the regressions to enable comparisons across analyses. (In the SI Appendix, we describe additional analyses which show that our analyses are robust to: (a) an alternative way of estimating the income of the 10th and 50th percentile; (b) whether or not we winsorize ratios; and (c) whether or not we log-transformed ratios.)

To illustrate the discernibility of bottom- and top-concentrated economic inequality, Figure 2 depicts both income ratios aggregated at the state-level, highlighting that the same area may vary in the extent to which economic inequality is concentrated at the bottom or at the top. (We note that this figure is merely for illustrative purposes, as our analyses are conducted at the zip-code level, not at the state-level).

Figure 2

Bottom- and Top-Concentrated Economic Inequality Across the U.S.

Note. Panel A shows the extent of bottom-concentrated economic inequality (50-10 ratio); Panel B shows the extent of top-concentrated economic inequality (95-50) ratio across the various states in the United States.

Dependent Variable: Subjective Well-Being. We measured subjective well-being through the Well-Being Index, as reported by Gallup. The Well-Being Index was consolidated to a scale of 0 to 100, where 0 represents the lowest possible well-being and 100 represents the highest possible well-being ($M = 62.33$, $SD = 14.22$). We standardized the Well-Being Index before conducting our analysis.

Control Variable: Gini Coefficient. Given the Gini coefficient's prior association to subjective well-being, and to improve discernibility, we retrieved the Gini coefficient for each zip code as measured through the ACS ($M = .437$, $SD = .052$). Because the Gini is bounded statistically between 0 and 1, we do not winsorize it in our regression specifications described

below. However, all results presented here are robust if we instead include the winsorized Gini. We standardized this variable before conducting the regression.

Control Variable: Income. Given income's prior association with subjective well-being (Kahneman & Deaton, 2010), we estimated annual income of each respondent by taking the midpoint of each income bucket, except "\$120,000 and over," on a 10-point scale ("Under \$720," "\$720 to \$5,999," "\$6,000 to \$11,999," "\$12,000 to \$23,999," "\$24,000 to \$35,999," "\$36,000 to \$47,999," "\$48,000 to \$59,999," "\$60,000 to \$89,999," "\$90,000 to \$119,999," "\$120,000 and over") as provided by the Gallup U.S. Poll ($M = \$78,079.30$, $SD = \$60,606.47$) (see Table S1 for a frequency table). To estimate the midpoint of "\$120,000 and over," similar to prior research (Cheung & Lucas, 2016), we used the 2017 Current Population Survey and found that the median income for those with more than \$120,000 was between \$185,000 and \$189,999. As such, we took the midpoint of that range (i.e., \$187,500) as the estimate for participants who reported that their income was in the "\$120,000 and over" income bucket. Following prior research highlighting that the relationship between income and subjective well-being is log-linear (Kahneman & Deaton, 2010), we log-transformed income. We also standardized income before conducting the regressions.

Additional Control Variables. We used factors that have been previously associated with subjective well-being (see Cheung & Lucas, 2016) as additional control variables at two different levels: the individual respondent level, and the zip code level, similar to prior research. The individual level control variables were retrieved from the Gallup U.S. Poll, while the zip code level control variables were retrieved from the ACS. Importantly, these zip-code level variables also allow us to distinguish bottom-concentrated economic inequality from poverty (i.e., unemployment, mean family income, and average education levels).

Individual-Level: Age. We standardized age before conducting the regression.

Individual-Level: Female. We recoded respondents who identified as Female as “1” and those who identified as Male as “0.”

Individual-Level: Non-White. We recoded respondents who identified as White as “0” and those who identified as other races (i.e. Black, Asian, Hispanic or Other) as “1.”

Individual-Level: Years of Education. We recoded levels of education (e.g. “High School Graduate”) into estimated years of education completed by each respondent ($M = 13.70$, $SD = 1.60$). We standardized years of education before conducting the regression. All analyses produce similar results if we treat education as an ordinal variable.

Individual-Level: Married. We recoded respondents who were married as “1” and all other responses (“Single/Never been married,” “Separated,” “Divorced,” “Widowed,” “Domestic Partnership/Living with Partner”) as “0.”

Individual-Level: Children in Household. We standardized the number of children in each household before conducting the regression ($M = .56$, $SD = 1.07$).

Individual-Level: Unemployment. We recoded respondents who reported as “Unemployed” as “1” and all other responses (“Employed Full Time (Employer),” “Employed Full Time (Self),” “Employed Part Time, Do Not Want Full Time,” “Employed Part Time, Want Full Time” and “Not in Work Force”) as “0.”

Zip Code-Level: Age. We retrieved the median age in each zip code from the ACS ($M = 38.60$, $SD = 6.75$). We standardized this variable before conducting the regression.

Zip Code-Level: Female. We retrieved the percentage of females in each zip code from the ACS ($M = 50.90$, $SD = 2.79$). We standardized this variable before conducting the regression.

Zip Code-Level: Non-White. We retrieved the percentage of non-White individuals in each zip code from the ACS ($M = 24.69$, $SD = 20.97$). We standardized this variable before conducting the regression.

Zip Code-Level: Mean Education Level. We retrieved average education level completed by the population in each zip code through the average education index as measured in the ACS ($M = 13.70$, $SD = 1.61$). We standardized this variable before conducting the regression.

Zip Code-Level: Unemployment. We estimated zip code-level unemployment rate by using both the unemployed male ($M = 6.55$, $SD = 2.96$) and unemployed female ($M = 5.13$, $SD = 2.51$) civilian population percentage as measured through the ACS. We standardized these variables before conducting the regression.

Zip Code-Level: Median Family Income. We obtained median family income from the ACS for every zip code ($M = \$71,852.98$, $SD = \$29,737.74$). Similar to above, we log-transformed median family income. We also standardized this variable before conducting the regressions to ease interpretation of analyses.

Zip Code-Level: Population Density. We measured population density per square mile of land area as used in the ACS ($M = 4064.06$, $SD = 10,391.63$). We standardized this variable before conducting the regression.

Results

Table 1 depicts the bivariate correlations of our key variables. A table including all control variables is presented in Table S2 of the SI Appendix.

Table 1**Means, Standard Deviations, and Bivariate Correlations of Key Study Variables**

Variables	<i>M</i>	<i>SD</i>	1	2	3	4
1. Gini Coefficient	.44	.05				
2. 50-10 Economic Inequality Ratio	4.30	1.35	.44***			
3. 95-50 Economic Inequality Ratio	5.47	1.56	.82***	.25***		
4. Income	78,079.30	60,606.47	-.05***	-.08***	.01***	
5. Subjective Well-Being	62.33	14.22	.00	-.04***	.03***	.24***

Note. All economic inequality ratios displayed here have been winsorized but have not undergone log transformation. A table including all control variables is presented in Table S2 of the SI Appendix. *** $p < .001$, ** $p < .01$, * $p < .05$.

Main Effect of Gini Coefficient and Economic Inequality Ratios on Well-Being. We used linear regression modeling with fixed effects for both year and zip code, with subjective well-being as the dependent variable, and the Gini coefficient and economic inequality ratios (50-10 and 95-50) as the independent variables. We subsequently present our analyses in the following order: we first show the relationship between the previously-studied Gini coefficient and subjective well-being both without (see Table 2, Model 1) and with controls (see Table 2, Model 2); we then show the relationship between the economic inequality ratios and subjective well-being both without (see Table 2, Model 3) and with controls (see Table 2, Model 4); finally, we present the relationship regressing both the Gini coefficient and the economic inequality ratios on subjective well-being including controls¹ (see Table 2, Model 5).

Our analyses revealed that the Gini coefficient had no statistically significant effect on well-being without control variables ($b = -.002$, $SE = .002$, $p = .34$; see Table 2, Model 1) but a statistically significant effect with control variables ($b = .023$, $SE = .002$, $p < .001$; see Table 2,

¹ To ensure multi-collinearity is not an issue, we calculated the Variance Inflation Factor, and found that the VIF was < 10 for all variables across all models (Kutner, Nachtsheim, & Neter, 2004).

Model 2) demonstrating one potential explanation for the mixed results based on the Gini coefficient in prior analyses.

Table 2
Opposing Effects of Economic Inequality Ratios on Subjective Well-Being

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-.005 (.010)	-.063*** (.007)	-.002 (.010)	-.062*** (.007)	-.062*** (.007)
Gini Coefficient	-.002 (.002)	.023*** (.002)			.004 (.004)
50-10 Economic Inequality Ratio			-.050*** (.002)	-.007*** (.002)	-.008*** (.002)
95-50 Economic Inequality Ratio			.044*** (.002)	.030*** (.002)	.027*** (.003)
Individual-Level Controls		Y		Y	Y
Zip-Code-Level Controls		Y		Y	Y
Num. obs.	568,934	408,254	560,122	405,533	405,533
Num. groups: Zip Code	28,475	16,490	24,423	15,405	15,405
Num. groups: Year	4	4	4	4	4

Note. Table 2 shows that there is no statistically significant relationship between Gini coefficient and well-being when including 50-10 and 95-50 economic inequality ratios as seen in Model 5. Even when controlling for relevant control variables, the 50-10 ratio has a statistically significant and negative effect on subjective well-being and the 95-50 ratio has a statistically significant and positive effect on subjective well-being. *** $p < .001$, ** $p < .01$, * $p < .05$.

Crucially, and in support of Hypothesis 1, we found a statistically significant and negative relationship of the 50-10 economic inequality ratio on subjective well-being ($b = -.050$, $SE = .002$, $p < .001$; see Table 2, Model 3), an effect which held when accounting for relevant control variables including the Gini ($b = -.008$, $SE = .002$, $p < .001$; see Table 2, Model 5). That is, a higher 50-10 economic inequality ratio was associated with lower subjective well-being. In support of Hypothesis 2, our findings showed a statistically significant and positive relationship of the 95-50 economic inequality ratio on subjective well-being ($b = .044$, $SE = .002$, $p < .001$; see Table 2, Model 3), an effect which held when accounting for relevant control variables

including the Gini ($b = .027$, $SE = .003$, $p < .001$; see Table 2, Model 5). That is, a higher 95-50 economic inequality ratio was associated with higher subjective well-being (see Figure 3).

Figure 3

Illustration of the Opposing Effects of Economic Inequality on Subjective Well-Being

Note. Economic inequality concentrated at the bottom (blue line) is negatively associated with subjective well-being, while economic inequality concentrated at the top (red line) is positively associated with subjective well-being. Grey bars reflect 95% Confidence Interval. For ease of comprehension, the figure depicts the dependent variable on its original 0-100 scale.

Interaction with Individual Income. We additionally explored whether these effects were further moderated by income. We did not have *a priori* predictions whether the effects of different sources of economic inequality—bottom-concentrated versus top-concentrated—would affect low-income or high-income individuals more.

On the one hand, low-income individuals may be more sensitive to the increased perceived unfairness of bottom-concentrated economic inequality, and as a result, report lower levels of subjective well-being (Brown-Iannuzzi, Lundberg, Kay, & Payne, 2015). Similarly, in the face of high top-concentrated economic inequality, low-income individuals may be

particularly likely to engage in system justification and endorse meritocratic ideals, increasing their subjective well-being as a result (Jost & Hunyady, 2005). On the other hand, it is also plausible for high-income individuals to be more sensitive to the increased perceived unfairness of bottom-concentrated economic inequality, and as a result report lower levels of subjective well-being (Jetten et al., 2017). In addition, higher-income individuals may be particularly likely to report increased subjective well-being when top-concentrated economic inequality is higher, given that their higher position in the income distribution status is more attributable to merit (Napier & Jost, 2008).

To explore the moderating effects of income, we tested for interaction effects between our measures of economic inequality (i.e., the Gini coefficient and economic inequality ratios) and individual income on subjective well-being. As before, we present our analyses in the following order: we first show the interaction effect between the Gini coefficient and income on subjective well-being both without (see Table 3, Model 1) and with controls (see Table 3, Model 2); we then show the interaction effect between the economic inequality ratios and income on subjective well-being both without (see Table 3, Model 3) and with controls (see Table 3, Model 4); and finally, we regress both the interaction effects of the Gini coefficient and income, and the economic inequality ratios and income on subjective well-being including controls² (see Table 3, Model 5).

² To check for multi-collinearity, we calculated the Variance Inflation Factor and found that the VIF was < 10 for all variables (Kutner et al., 2004), suggesting that multi-collinearity is not a issue in our regressions here.

Table 3**Interaction Between Top- and Bottom-Concentrated Economic Inequality and Income**

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	.001 (.009)	-.063*** (.007)	-.001 (.010)	-.062*** (.007)	-.063*** (.007)
Individual Income	.235*** (.001)	.183*** (.002)	.234*** (.001)	.184*** (.002)	.184*** (.002)
Gini Coefficient	.009*** (.002)	.023*** (.002)			.005 (.004)
Gini Coefficient $\times$ Individual Income	-.002 (.001)	-.004** (.001)			-.008** (.003)
50-10 Economic Inequality Ratio			-.031*** (.002)	-.008*** (.002)	-.009*** (.002)
95-50 Economic Inequality Ratio			.036*** (.002)	.030*** (.002)	.027*** (.003)
50-10 Economic Inequality Ratio $\times$ Individual Income			-.011*** (.001)	-.011*** (.001)	-.009*** (.002)
95-50 Economic Inequality Ratio $\times$ Individual Income			.005*** (.001)	.003* (.002)	.010*** (.003)
Individual-Level Controls		Y		Y	Y
Zip-Code-Level Controls		Y		Y	Y
Num. obs.	568,934	408,254	560,122	405,533	405,533
Num. groups: Zip Code	28,475	16,490	24,423	15,405	15,405
Num. groups: Year	4	4	4	4	4

Note. There is no statistically significant relationship between the interaction of Gini coefficient and income on subjective well-being when including the interaction of 50-10 and 95-50 economic inequality ratios and income as seen in Model 5. In contrast, the interaction effects between 50-10 and 95-50 ratios and income are statistically significant and robust to the inclusion of relevant control variables. *** $p < .001$, ** $p < .01$, * $p < .05$.

Our analyses revealed that the interaction between the Gini coefficient and income had no statistically significant effect on subjective well-being ($b = -.002$, $SE = .002$, $p = .123$; see Table 3, Model 1). Conversely, our analyses utilizing income ratios revealed a statistically significant interaction effect between the 50-10 economic inequality ratio and individual income ($b = -.009$, $SE = .002$, $p < .001$; see Table 3, Model 5) and a statistically significant interaction effect between the 95-50 economic inequality ratio and income ($b = .010$, $SE = .003$, $p < .001$; see Table 3, Model 5) on subjective well-being. These effects all hold with and without controlling for relevant control variables, and including the Gini coefficient.

To further understand these interactions, we conducted simple slope analysis at ± 1 *SD* below and above the mean of income, as depicted in Figure 4.

Figure 4

Simple Slopes for Interaction Between 50-10 (Panel A) and 95-50 (Panel B) Economic Inequality Ratio with Income on Subjective Well-Being

Note. Respondents with higher income ($+1$ *SD*), compared to respondents with lower income (-1 *SD*), were more influenced by the opposing effects of the economic inequality ratios on subjective well-being. The dependent variable is presented here in raw format for ease of comprehension.

We found that when individual income was higher ($+1$ *SD*; this corresponds to ~\$135,000 in our dataset), the 50-10 economic inequality ratio had a statistically significant and negative relationship with subjective well-being ($b = -.018$, $SE = .003$, $p < .001$), but when individual income was lower (-1 *SD*; this corresponds to ~\$20,000 in our dataset), the 50-10 economic inequality ratio had no statistically significant effect on subjective well-being ($b = -.001$, $SE = .003$, $p = .887$). This suggests that for those with higher income, greater bottom-concentrated economic inequality is associated with lower subjective well-being, but for those with lower income, bottom-concentrated economic inequality has no statistically significant relationship with subjective well-being. These results support the idea that high-income individuals are more strongly negatively affected by higher bottom-concentrated economic inequality.

Turning to top-concentrated economic inequality, we found that when individual income was higher (+1 *SD*), the 95-50 economic inequality ratio had a statistically significant and positive relationship with well-being ($b = .037$, $SE = .004$, $p < .001$), and when individual income was lower (-1 *SD*), the 95-50 economic inequality ratio also had a statistically significant but weaker effect on subjective well-being ($b = .017$, $SE = .004$, $p < .001$). This suggests that those with higher incomes are particularly more likely to indicate higher subjective well-being at greater top-concentrated economic inequality. These findings support the notion that high-income individuals are more strongly positively affected by higher top-concentrated economic inequality.

Discussion

Our theory and results suggest that where economic inequality is concentrated—whether at the bottom or top of the income distribution—has opposing effects on subjective well-being. Specifically, we found that economic inequality that is driven by a greater concentration of poverty among the poor is associated with lower subjective well-being, while economic inequality that is driven by a greater concentration of affluence among the rich is associated with higher subjective well-being. We also found that these effects were stronger for higher-income individuals, such that greater bottom-concentrated economic inequality was associated with lower subjective well-being for higher-income individuals, while greater top-concentrated economic inequality was associated with higher subjective well-being for higher-income individuals. Taken together, our theory and results provide a novel conceptual window into the inconsistent findings exploring the relationship between economic inequality and subjective well-being (Ngamaba, Panagiotou, & Armitage, 2018), highlighting that both conceptually and in

its measurement, researchers need to move towards a greater focus on where income dispersion is concentrated to better understand the effects of economic inequality.

The perspective advanced in the current research also contributes to the broader literature exploring how economic inequality is related to several outcomes of societal import in addition to subjective well-being, including prosocial behavior (Côté, House, & Willer, 2015; Schmukle, Korndörfer, & Egloff, 2019) and risk-taking (Cappelen, Konow, Sørensen, & Tungodden, 2013; Payne et al., 2017). For example, evidence suggesting that higher-status individuals exhibit less generosity than their lower-status counterparts only in highly unequal societies (Côté et al., 2015) has recently been contested (Schmukle et al., 2019). Viewed through the lens advanced here, it is possible that higher-status individuals are less generous when top-concentrated economic inequality is higher but more generous when bottom-concentrated economic inequality is higher. Focusing on where economic inequality is concentrated thus allows researchers to gain a deeper understanding of how economic inequality may shape behaviors by individuals across the income spectrum.

One limitation of the current research is that our data is correlational, and thus does not allow us to infer causality. In addition, the current research does not provide empirical insight into potential underlying drivers of the opposing relationship between bottom- and top-concentrated economic inequality on subjective well-being. Indeed, although we draw on extant theory to provide potential mechanisms—i.e., unfairness for bottom- and merit for top-concentrated economic inequality—other mechanisms that draw on trust (Oishi et al., 2011), perceived conflict (Delhey, Dragolov, & Pickett, 2014) and hope (Cheung, 2016) may also be possible. These alternative accounts may take on particular importance as future research

explores how different concentrations of economic inequality influence individuals in countries beside the U.S., particularly in non-market based or non-Western countries.

Our results also suggest an alternative path through which policy-makers may want to support subjective well-being across the income distribution (Frijters et al., 2019). One way to better understand the effects of economic inequality on subjective well-being is to shift attention to the gap between the poorest and the median earner, i.e., bottom-concentrated economic inequality, and test interventions that reduce this gap. This perspective is aligned both with recent research highlighting that the financial and psychological costs of economic inequality accrue particularly to low-income individuals (Jachimowicz et al., 2020; Sommet et al., 2018) as well as recent poverty-alleviation initiatives focused on unconditional cash transfers that seek to minimize bottom-concentrated economic inequality (Haushofer & Shapiro, 2016). Indeed, adopting policies that reduce bottom-concentrated economic inequality may both promote subjective well-being among low-income individuals by boosting their incomes, and—perhaps contrary to intuition—also boost the subjective well-being of high-income individuals.

Scholars and policy-makers may also wish to better understand the role of top-concentrated economic inequality. While our results suggest that economic inequality which is concentrated toward the top end of the income distribution is associated with greater subjective well-being—particularly for higher-income individuals—we caution against overinterpretation of this finding. In the U.S., the concentration of income among the rich is highly skewed toward the very top end of the distribution, such that the top 1% (and even the top 0.1%) of earners are various multitudes richer than even those at the 95th percentile (Garbinti, Goupille-Lebret, & Piketty, 2019). Our study used estimates for the top 5% of earners, which is the highest percentile for which we could obtain reliable data; however, these results do not imply that our

findings generalize to earners and income ratios restricted to the very rich. Indeed, economic inequality at the very top end of the income distribution (e.g., 99-95 or even 99.9-99 ratios) might have negative effects on subjective well-being because ordinary citizens might perceive top economic advancement as particularly unfair. Future research should identify ways to estimate extreme economic inequality reliably at the top end of the distribution (e.g., Schröder et al., 2019), and test the predictions we propose here.

Despite the widespread attention on economic inequality, our research suggests that focusing on improving the lives of those at the bottom of the income distribution may be particularly powerful. In the words of the philosopher Harry Frankfurt (2015), “[i]t is not important that everyone should have the same. What is important is that each should have enough.”

References

- Alesina, A., Stantcheva, S., & Teso, E. (2018). Intergenerational Mobility and Preferences for Redistribution. *American Economic Review*, 108(2), 521–554.
- Alves, W. M., & Rossi, P. H. (1978). Who Should Get What ? Fairness Judgments of the Distribution of Earnings. *American Journal of Sociology*, 84(3), 541–564.
- Benabou, R., & Ok, E. A. (2001). Social mobility and the demand for redistribution: The POUM hypothesis. *Quarterly Journal of Economics*, 116(2), 447–487.
- 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.
- Cappelen, A. W., Konow, J., Sørensen, E., & Tungodden, B. (2013). Just luck: An experimental study of risk-taking and fairness. *American Economic Review*, 106(2), 476–477.
- 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.
- Cheung, F., & Lucas, R. E. (2016). Income inequality is associated with stronger social comparison effects: The effect of relative income on life satisfaction. *Journal of Personality and Social Psychology*, 110(2), 332–341.
- Connelly, B. L., Tihanyi, L., Crook, T. R., & Gangloff, K. A. (2014). Tournament Theory: Thirty Years of Contests and Competitions. *Journal of Management*, 40(1), 16–47.
- Côté, S., House, J., & Willer, R. (2015). High economic inequality leads higher-income individuals to be less generous. *Proceedings of the National Academy of Sciences*, 112(52), 15838–15843.
- 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.
- Davidai, S., & Gilovich, T. (2018). The ideal road not taken: The self-discrepancies involved in people's most enduring regrets. *Emotion*, 18(3), 439–452.
- De Maio, F. G. (2007). Income inequality measures. *Journal of Epidemiology and Community Health*, 61(10), 849–852.
- Delhey, J., Dragolov, G., & Pickett, K. (2014). Why Inequality Makes Europeans Less Happy: The Role of Distrust , Status Anxiety , and Perceived Conflict. *European Sociological Review*, 30(2), 151–165.
- Economic Policy Institute. (2018). *The new gilded age: Income inequality in the U.S. by state, metropolitan area, and county*.
- Frankfurt, H. (2015). *On Equality*. Princeton University Press.
- Frijters, P., Clark, A. E., Krekel, C., & Layard, R. (2019). *A Happy Choice : Wellbeing as the Goal of Government*. (12720).
- Frohlich, N., Oppenheimer, J., & Eavey, C. (1987). Choices of Principles of Distributive Justice in Experimental Groups. *American Journal of Political Science*, 31(3), 606–636.
- Garbinti, B., Goupille -Lebret, J., & Piketty, T. (2019). *Accounting for Wealth Inequality Dynamics: Methods, Estimates and Simulations for France (1800-2014)*.
<https://doi.org/10.2139/ssrn.2997069>
- Haushofer, J., & Shapiro, J. (2016). The short-term impact of unconditional cash transfers to the poor: Experimental evidence from kenya. *Quarterly Journal of Economics*, 131(4), 1973–2042.

- Ifcher, J., Zarghamee, H., & Graham, C. (2019). Income inequality and well-being in the U.S.: evidence of geographic-scale- and measure-dependence. *Journal of Economic Inequality*.
- Jachimowicz, J., Szasi, B., Lukas, M., Smerdon, D., Prabhu, J., & Weber, E. (2020). Higher Economic Inequality Intensifies the Financial Hardship of People Living in Poverty by Fraying the Community Buffer. *Nature Human Behaviour*, in press, preprint available at: <https://psyarxiv.com/hpkb2>
- Jetten, J., Wang, Z., Steffens, N. K., Mols, F., Peters, K., & Verkuyten, M. (2017). A social identity analysis of responses to economic inequality. *Current Opinion in Psychology*, 18(17), 1–5.
- Jost, J. T., & Hunyady, O. (2005). *Antecedents and Consequences of System-Justifying Ideologies*. 14(5), 114–118.
- Kahneman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences*, 107(38), 16489–16493.
- Kim, P., Rich, M., & Horowitz, J. (2019). *Views of America's future in 2050*.
- Kirsch, J. A., Love, G. D., Radler, B. T., & Ryff, C. D. (2019). Growing Inequality in America Scientific Imperatives Vis-a. *American Psychologist*, 74(7), 764–777.
- 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.
- Kutner, M., Nachtsheim, C., & Neter, J. (2004). *Applied Linear Regression Models* (4th ed.). McGraw-Hill Education.
- Liu, Y., & Gastwirth, J. L. (2020). On the capacity of the Gini index to represent income distributions. *METRON*, in press.
- Michelbach, P. A., Scott, J. T., Matland, R. E., & Bornstein, B. H. (2003). Doing Rawls justice: An experimental study of income distribution norms. *American Journal of Political Science*, 47(3), 523–539.
- Mitchell, G., Tetlock, P. E., Mellers, B. A., & Ordóñez, L. D. (1993). Judgments of Social Justice: Compromises Between Equality and Efficiency. *Journal of Personality and Social Psychology*, 65(4), 629–639.
- Napier, J. L., & Jost, J. T. (2008). Why are conservatives happier than liberals? *Psychological Science*, 19(6), 565–572.
- Ngamaba, K. H., Panagioti, M., & Armitage, C. J. (2018). Income inequality and subjective well-being : a systematic review and meta-analysis. *Quality of Life Research*, 27(3), 577–596.
- Oishi, S., & Kesebir, S. (2015). Income Inequality Explains Why Economic Growth Does Not Always Translate to an Increase in Happiness. *Psychological Science*, 26(10), 1630–1638.
- Oishi, S., Kesebir, S., & Diener, E. (2011). Income Inequality and Happiness. *Psychological Science*, 22(9), 1095–1100.
- 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.
- Rawls, J. (1971). *A Theory of Justice*. Cambridge: Harvard University Press.
- Schmukle, S. C., Korndörfer, M., & Egloff, B. (2019). No evidence that economic inequality moderates the effect of income on generosity. *Proceedings of the National Academy of Sciences of the United States of America*, 116(20), 9790–9795.
- Schröder, C., Bartels, C., Grabka, M., König, J., Kroh, M., & Siegers, R. (2019). A novel sampling strategy for surveying high net-worth individuals—a pretest application using the socio-economic panel, *Review of Income and Wealth*, in press.

Shaw, J. D. (2014). Pay Dispersion. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1), 521–544.

Sommet, N., Morselli, D., & Spini, D. (2018). Income inequality affects the psychological health of only the people facing scarcity. *Psychological Science*, 29(12), 1911-1921.

SI Appendix for

Opposing Effects of Economic Inequality Concentrated at the Top or Bottom of the Income

Distribution on Well-Being

Table S1**Number of Individuals in Each Income Bucket**

Income Bucket	<i>N</i>	%
Under \$720	7,863	1.34
\$720 to \$5,999	8,773	1.50
\$6,000 to \$11,999	24,390	4.17
\$12,000 to \$23,999	65,301	11.12
\$24,000 to \$35,999	72,989	12.48
\$36,000 to \$47,999	59,062	10.10
\$48,000 to \$59,999	59,753	10.22
\$60,000 to \$89,999	109,887	18.79
\$90,000 to \$119,999	61,779	10.56
\$120,000 and over	114,940	19.67
<i>Total</i>	584,737	100

Note. Number of individuals in each income bucket as measured through the Gallup US Poll data.

Table S2

Bivariate Correlation, Means, and Standard Deviation of All Variables

Variables	<i>M(SD)</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. 50-10 Econ Inequality Ratio	4.30 (1.35)																			
2. 95-50 Econ Inequality Ratio	5.47 (1.56)	.25***																		
3. Subjective Well-Being	62.33 (14.22)	-.04***	.03***																	
4. Gini	.44 (.05)	.44***	.82***	.00																
5. Individual: Income	78,079.30 (60,606.47)	-.09***	.01***	.24***	-.05***															
6. Individual: Age	53.10 (18.49)	-.05***	.00	.13***	-.02***	-.03***														
7. Individual: Female	.52 (.50)	-.01**	.00	-.04***	-.01***	.12***	-.11***													
8. Individual: Non-White	.17 (.38)	.13***	.03***	-.03***	.09***	-.13***	-.17***	.01***												
9. Individual: Education	13.70 (1.60)	-.01***	.09***	.12***	.05***	.35***	.06***	.00	-.09***											
10. Individual: Married	.52 (.49)	-.10***	-.05***	.19***	-.10***	.35***	.12***	.09***	-.12***	.15***										
11. Individual: Children	.56 (1.07)	-.02***	-.04***	-.03***	-.05***	.06***	-.35***	.02***	.10***	-.04***	.14***									
12. Individual: Unemployed	.03 (.17)	.02***	.00	-.12***	.01***	-.14***	-.11***	.00***	.05***	-.05***	-.07***	.03***								
13. Zip Code: Median Age	38.60 (6.75)	-.19***	.06***	.07***	-.03***	.08***	.21***	-.01***	-.18***	.06***	.08***	-.09***	-.03***							
14. Zip Code: Female Population %	50.90 (2.79)	.05***	.08***	-.01***	.10***	.00*	.03***	-.02***	.07***	.03***	-.02***	-.01***	.01***	.11***						
15. Zip Code: Non-White Population %	24.69 (20.97)	.28***	.07***	-.07***	.20***	-.10***	-.13***	-.01***	.43***	-.05***	-.14***	.05***	.05***	-.40***	.14***					
16. Zip Code: Average Education Index	13.70 (1.17)	-.04***	.26***	.13***	.13***	.27***	.03***	.02***	-.16***	.31***	.09***	-.06***	-.04***	.19***	.09***	-.24***				
17. Zip Code: Unemployed Male %	6.55 (2.96)	.18***	-.05***	-.10***	.07***	-.16***	-.05***	-.02***	.21***	-.14***	-.11***	.03***	.04***	-.20***	.11***	.43***	-.46***			
18. Zip Code: Unemployed Female %	5.13 (2.51)	.19***	-.02***	-.09***	.08***	-.16***	-.08***	-.01***	.23***	-.13***	-.11***	.03***	.04***	-.30***	.03***	.49***	-.44***	.66***		
19. Zip Code: Median Family Income	71,852.98 (29,737.74)	-.19***	.05***	.13***	-.11***	.31***	.04***	.03***	-.18***	.26***	.13***	-.02***	-.04***	.25***	.02***	-.32***	.83***	-.51***	-.50***	
20. Zip Code: Population Density	4064.06 (10,391.63)	.23***	.21***	-.02***	.27***	-.01***	-.09***	.01***	.14***	.03***	-.08***	.00	.02***	-.16***	.11***	.30***	.05***	.08***	.10***	.00*

Note. Both economic inequality ratios (50-10 and 95-50) in this table have undergone winsorization but have not been not log-transformed. *** $p < .001$, ** $p < .01$, * $p < .05$.

As an additional robustness check, we used an alternative way of estimating the income of the 10th and 50th percentile individual by considering the position of the percentile individual within each income bucket. For example, to estimate the 10th percentile, we took the end of the income bucket that the 10th percentile individual is in (e.g., we took “\$10,000 and under” as \$10,000) minus the percentage of individuals who are left over in that income bucket after the 10th percentile individual, multiplied with the difference of that income bucket (i.e., \$10,000). We conducted the same analyses with this alternative way of estimating the incomes and found no meaningful changes in our results (as reported in Tables S3 and S4).

Table S3**Economic Inequality Ratios, But Not Gini Coefficient, Predict Subjective Well-Being****(Alternative Estimation Method)**

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-.005 (.010)	-.063*** (.007)	-.002 (.010)	-.062*** (.007)	-.062*** (.007)
Gini Coefficient	-.002 (.002)	.023*** (.002)			.004 (.004)
50-10 Economic Inequality Ratio			-.046*** (.002)	-.009*** (.002)	-.010*** (.003)
95-50 Economic Inequality Ratio			.050*** (.002)	.032*** (.002)	.029*** (.004)
Individual-Level Controls		Y		Y	Y
Zip-Code-Level Controls		Y		Y	Y
Num. obs.	568,934	408,254	560,122	405,533	405,533
Num. groups: Zip Code	28,475	16,490	24,423	15,405	15,405
Num. groups: Year	4	4	4	4	4

Note. Results using the same analyses as in Table 2 with an alternative way to estimate the economic inequality ratios. For example, to estimate the 10th percentile, instead of taking the midpoint of the bucket in which the 10th percentile individual is in, we took the end of the income bucket that the 10th percentile individual is in (for e.g. we took “\$10,000 and under” as \$10,000) minus the percentage of individuals who are left over in that income bucket after the 10th percentile individual, multiplied with the difference of that income bucket (i.e. \$10,000). *** $p < .001$, ** $p < .01$, * $p < .05$.

Table S4**Interaction Between Economic Inequality Ratios and Income on Subjective Well-Being****(Alternative Estimation Method)**

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	.001 (.009)	-.063*** (.007)	.001 (.009)	-.062*** (.007)	-.062*** (.007)
Individual Income	.235*** (.001)	.183*** (.002)	.235*** (.001)	.186*** (.002)	.186*** (.002)
Gini Coefficient	.009*** (.002)	.023*** (.002)			.003 (.004)
Gini Coefficient x Individual Income	-.002 (.001)	-.004** (.001)			.001 (.003)
50-10 Economic Inequality Ratio			-.033*** (.002)	-.009*** (.002)	-.010*** (.002)
95-50 Economic Inequality Ratio			.042*** (.002)	.032*** (.002)	.030*** (.004)
50-10 Economic Inequality Ratio x Individual Income			-.018*** (.001)	-.019*** (.002)	-.019*** (.002)
95-50 Economic Inequality Ratio x Individual Income			.010*** (.001)	.009*** (.002)	.009** (.003)
Individual-Level Controls		Y		Y	Y
Zip-Code-Level Controls		Y		Y	Y
Num. obs.	568,934	408,254	560,122	405,533	405,533
Num. groups: Zip Code	28,475	16,490	24,423	15,405	15,405
Num. groups: Year	4	4	4	4	4

Note. Results using the same analyses as in Table 3 with an alternative way to estimate the economic inequality ratios. We estimated the income of the 10th, 20th, and 50th percentile individual in each zip code by considering their position within each income bucket. For example, to estimate the 10th percentile, we took the end of the income bucket that the 10th percentile individual is in (for e.g. we took “\$10,000 and under” as \$10,000) minus the percentage of individuals who are left over in that income bucket after the 10th percentile individual, multiplied with the difference of that income bucket (i.e. \$10,000). *** $p < .001$, ** $p < .01$, * $p < .05$.

Table S5**Relationship Between Subjective Well-Being and Economic Inequality Ratios****(Without Winsorization)**

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-.005 (.010)	-.063*** (.007)	-.002 (.010)	-.062*** (.007)	-.062*** (.007)
Gini Coefficient	-.002 (.002)	.023*** (.002)			-.000 (.004)
50-10 Economic Inequality Ratio			-.048*** (.002)	-.006** (.002)	-.006** (.002)
95-50 Economic Inequality Ratio			.044*** (.002)	.030*** (.002)	.030*** (.004)
Individual-Level Controls		Y		Y	Y
Zip-Code-Level Controls		Y		Y	Y
Num. obs.	568,934	408,254	560,122	405,533	405,533
Num. groups: Zip Code	28,475	16,490	24,423	15,405	15,405
Num. groups: Year	4	4	4	4	4

Note. Results shows the same analyses as in Table 2 but with economic inequality ratios that have not undergone winsorization. *** $p < .001$, ** $p < .01$, * $p < .05$.

Table S6

**Subjective Well-Being Predicted by the Interaction Between Income and Economic
Inequality Ratios (Without Winsorization)**

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	.001 (.009)	-.063*** (.007)	.000 (.009)	-.063*** (.007)	-.063*** (.007)
Individual Income	.235*** (.001)	.183*** (.002)	.234*** (.001)	.184*** (.002)	.184*** (.002)
Gini Coefficient	.009*** (.002)	.023*** (.002)			.001 (.004)
Gini Coefficient x Individual Income	-.002 (.001)	-.004** (.001)			-.007* (.003)
50-10 Economic Inequality Ratio			-.030*** (.002)	-.008** (.002)	-.008** (.002)
95-50 Economic Inequality Ratio			.036*** (.002)	.030*** (.002)	.030*** (.004)
50-10 Economic Inequality Ratio x Individual Income			-.012*** (.001)	-.012*** (.001)	-.010*** (.002)
95-50 Economic Inequality Ratio x Individual Income			.005*** (.001)	.003* (.001)	.009** (.003)
Individual-Level Controls		Y		Y	Y
Zip-Code-Level Controls		Y		Y	Y
Num. obs.	568,934	408,254	560,122	405,533	405,533
Num. groups: Zip Code	28,475	16,490	24,423	15,405	15,405
Num. groups: Year	4	4	4	4	4

Note. Results shows the same analyses as in Table 3 but with economic inequality ratios that have not undergone winsorization. *** $p < .001$, ** $p < .01$, * $p < .05$.

Table S7**Economic Inequality Ratios Compared to Gini Coefficient Predict Subjective Well-Being****(Without Log-Transformation)**

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-.005 (.010)	-.063*** (.007)	-.002 (.010)	-.062*** (.007)	-.062*** (.007)
Gini Coefficient	-.002 (.002)	.023*** (.002)			-.002 (.004)
50-10 Economic Inequality Ratio			-.054*** (.002)	-.007*** (.002)	-.008*** (.002)
95-50 Economic Inequality Ratio			.047*** (.002)	.031*** (.002)	.030*** (.003)
Individual-Level Controls		Y		Y	Y
Zip-Code-Level Controls		Y		Y	Y
Num. obs.	568,934	408,254	560,122	405,533	405,533
Num. groups: Zip Code	28,475	16,490	24,423	15,405	15,405
Num. groups: Year	4	4	4	4	4

Note. Results using the same analyses as in Table 2 but with economic inequality ratios that have not undergone log-transformation. *** $p < .001$, ** $p < .01$, * $p < .05$

Table S8

Interaction Between Economic Inequality Ratios and Income Predicts Subjective Well-Being (Without Log-Transformations)

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	.001 (.009)	-.063*** (.007)	.000 (.009)	-.063*** (.007)	-.063*** (.007)
Individual Income	.235*** (.001)	.183*** (.002)	.233*** (.001)	.184*** (.002)	.184*** (.002)
Gini Coefficient	.009*** (.002)	.023*** (.002)			.002 (.004)
Gini Coefficient x Individual Income	-.002 (.001)	-.004** (.001)			-.009** (.003)
50-10 Economic Inequality Ratio			-.033*** (.002)	-.009*** (.002)	-.009*** (.002)
95-50 Economic Inequality Ratio			.038*** (.002)	.031*** (.002)	.029*** (.003)
50-10 Economic Inequality Ratio x Individual Income			-.011*** (.001)	-.011*** (.001)	-.009*** (.002)
95-50 Economic Inequality Ratio x Individual Income			.004** (.001)	.003* (.001)	.011*** (.003)
Individual-Level Controls		Y		Y	Y
Zip-Code-Level Controls		Y		Y	Y
Num. obs.	568,934	408,254	560,122	405,533	405,533
Num. groups: Zip Code	28,475	16,490	24,423	15,405	15,405
Num. groups: Year	4	4	4	4	4

Note. Results using the same analyses as in Table 3 but with economic inequality ratios that have not undergone log-transformation. *** $p < .001$, ** $p < .01$, * $p < .05$.