# Income Inequality Explains Why Economic Growth Does Not Always Translate to an Increase in Happiness

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## Abstract
One of the most puzzling social science findings in the past half century is the Easterlin paradox: Economic growth within a country does not always translate into an increase in happiness. We provide evidence that this paradox can be partly explained by income inequality. In two different data sets covering 34 countries, economic growth was not associated with increases in happiness when it was accompanied by growing income inequality. Earlier instances of the Easterlin paradox (i.e., economic growth not being associated with increasing happiness) can thus be explained by the frequent concurrence of economic growth and growing income inequality. These findings suggest that a more even distribution of growth in national wealth may be a precondition for raising nationwide happiness.

China sets 2014 GDP growth target at 7.5% (2014)

Brazil lowers growth forecast to 0.9 pct (2014)

These recent headlines capture the central status of gross domestic product (GDP) in public policy and the public eye. GDP is a key metric because it is widely held to be synonymous with citizens' welfare (Mankiw, 2014). This is why it came as a shock to many people when economist Richard Easterlin (1974) reported that Americans did not become happier between 1946 and 1970—a period of rapid economic growth. This phenomenon was so surprising that it became widely known as the Easterlin paradox in the social sciences. The Easterlin paradox refers to the contradiction that wealthier countries are happier on average, yet a country's happiness does not seem to increase as its wealth grows. Despite a large number of studies on economic growth and happiness conducted over the last 40 years, the literature is still divided about the existence and magnitude of the Easterlin paradox (Alesina, Di Tella, & MacCulloch, 2004; Diener & Oishi, 2000; Di Tella, MacCulloch, & Oswald, 2003; Easterlin, McVey, Switek, Sawangfa, & Zweig, 2010; Hagerty & Veenhoven, 2003; Stevenson & Wolfers, 2008).

On one side, critics note that the Easterlin paradox was not observed in many nations, such as France, Italy, and the United Kingdom (Stevenson & Wolfers, 2008) or Denmark, The Netherlands, and Luxembourg (Hagerty & Veenhoven, 2003). That is, as the economy grew in these nations, citizens' happiness increased as well. On the other side, some researchers have found evidence for the Easterlin paradox, at least in some nations (e.g., Diener & Oishi, 2000; Easterlin, 2005). Citizens' happiness did not grow with the economy in these nations, and in some of them it even decreased.

To understand these discrepant findings, some researchers have suggested that the paradox is found in richer nations but not in poorer nations. The idea was that economic growth would be associated with happiness gains in poor nations, but once basic needs were met (e.g., living standards reaching those of developed nations in the 1960s), further economic growth would

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not yield gains in citizens' happiness (Di Tella & MacCulloch, 2010).

This explanation is intuitive and appealing, but other researchers found contrary evidence: In several wealthy nations, mean life satisfaction did increase as the economy grew (Hagerty & Veenhoven, 2003; Stevenson & Wolfers, 2008; for a critique of these articles, see Easterlin et al., 2010). A recent analysis of Gallup World Poll data from 158 nations also showed that the within-nation correlation between GDP per capita and subjective well-being between 2005 and 2011 was not moderated by national income (Diener, Tay, & Oishi, 2013). The correlation was roughly the same for nations with per capita incomes of over $10,000 ($r = .19$) and nations with incomes less than $10,000 ($r = .23$). However, the Gallup data covered a brief 7-year period, which may not have been long enough to get reliable within-nation correlations.

We suggest that this conundrum of why some nations see gains in happiness as the economy grows whereas others do not can be partly resolved by considering the role of income inequality as a critical moderator. Economic growth is typically not shared equally across segments of society and often results in increased income inequality (Piketty, 2014). Many social scientists have documented that income inequality is associated with detrimental effects on economic opportunities and social mobility (Stiglitz, 2012), physical health (Wilkinson & Pickett, 2009), and happiness (Oishi, Kesebir, & Diener, 2011). A study of the U.S. General Social Surveys from 1972 to 2008 showed that Americans were on average happier in years of lower income inequality than in years of higher income inequality. Furthermore, this link between income inequality and lower happiness was explained by a heightened sense of unfairness and distrust in the years of greater income inequality (Oishi et al., 2011; see also Napier & Jost, 2008; Twenge, Campbell, & Carter, 2014, for similar findings).

Our previous study of income inequality and happiness (Oishi et al., 2011), however, did not examine the role of societal income (GDP per capita). Thus, we did not know yet whether income inequality can cancel out the potentially positive impact of economic growth. In addition, we had examined the inequality-happiness relationship only in the United States. In the current research, we examined the relationship in 34 nations. We hypothesized that the negative effects of income inequality may cancel out the positive effects of economic growth on happiness if economic growth comes with increased income inequality, because growth in national income would be concentrated in a small group of people, which might evoke a sense of unfairness and distrust in others. In contrast, we hypothesized that when economic growth was distributed more evenly across different segments of the population, it would translate into an increase in average happiness, because in such an economy, many
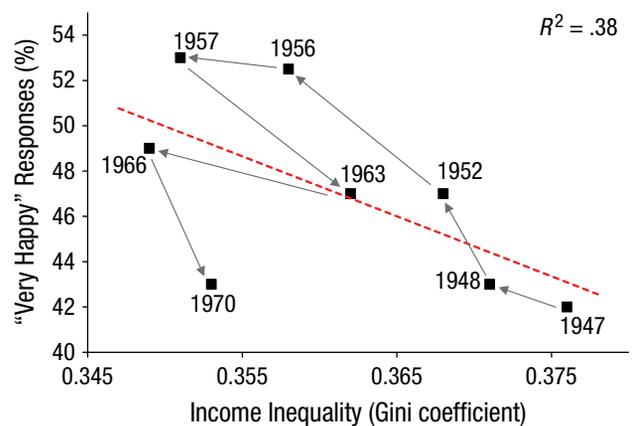


**Fig. 1.** Scatterplot (with best-fitting regression line) showing the relationship between income inequality, as measured by the Gini coefficient, and the percentage of "very happy" responses in American Institute of Public Opinion polls conducted intermittently between 1947 and 1970. The percentage of "very happy" responses was obtained from Easterlin (1974). Gini coefficients are based on household income from the U.S. Census Bureau (2014). The arrows highlight the chronological order of the data points.

citizens would benefit from the growing economy without suffering the negative effects of income inequality.

## Accounting for Easterlin's Observations With Income Inequality

We first tested whether this hypothesis could account for Easterlin's (1974) original findings. He reported that over a 25-year span (1946–1970) in which the United States became a lot richer, intermittent happiness surveys (American Institute of Public Opinion polls) did not show an increase in life satisfaction (Easterlin, 1974). The proportion of Americans who reported being "very happy" increased steadily from 1946 to 1957, took a dive from 1957 to 1963, then increased from 1963 to 1966, but dipped again from 1966 to 1970. This lack of correspondence between economic fortune and life satisfaction led Easterlin to consider it "safe to say that if income and happiness go together, it is not as obvious as in the within-country cross-sectional comparisons" (p. 111).

We added a measure of income inequality to Easterlin's (1974) data set. Our measure was the Gini coefficient, which quantifies the degree of deviation from a perfectly equal distribution (i.e., higher numbers indicate more inequality). We found that the percentage of respondents who said they were very happy was highly inversely correlated with income inequality ($r = -.618, p = .102$). Every single time income inequality decreased between two time points, the percentage of "very happy" responses went up. And every time income inequality increased, the percentage of "very happy" responses went down (Fig. 1). In other words, although economic growth was steady and strong during this period, the evenness of the

income distribution was fluctuating, and happiness was inversely related to income inequality. These findings provide initial support for the idea that the Easterlin paradox can be explained by the toxic effects of income inequality.

We next proceeded to more rigorously test our hypothesis that the within-nation correlation between GDP per capita and happiness would be moderated by income inequality. Across a large number of nations, we expected the relation between GDP per capita and happiness to be stronger when income inequality was lower, and weaker when income inequality was higher.

## Study 1: Veenhoven's World Database of Happiness

### Method

We first tested the hypothesis in Veenhoven's (2015) World Database of Happiness, which is an archive of happiness and life-satisfaction data from around the world. Surveys in the archive used different items and response scales, but the most common measure was a life-satisfaction item presented on a 4-point scale. To examine the Easterlin paradox across as many nations as possible, we chose as our dependent variable nations' mean score on this item. We selected for analysis nations with mean life-satisfaction scores from at least 10 different years between 1959 and 2006. Sixteen nations met this criterion (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, The Netherlands, Portugal, Spain, Sweden, and the United Kingdom). The GDP per capita data were taken from the World Development Indicators online database (World Bank, 2009).

We used GDP per capita rather than GDP growth rate because the Easterlin paradox concerns the relationship between changes in GDP per capita and changes in happiness. The key question is whether citizens are happier in years of higher GDP per capita, rather than in years of higher GDP per capita *growth rate*. That is, if nation $A$'s GDP per capita income grew from $10,000 (year $t$) to $11,000 (year $t + 1$), and then fell back to $10,000 (year $t + 2$), did the mean happiness of nation $A$ also grow from year $t$ to year $t + 1$ and decrease from year $t + 1$ to year $t + 2$? In contrast, the GDP per capita growth rate is indexed by percentage change from the previous year. If the same nation $A$'s GDP per capita was $8,000 in year $t − 1$, then the corresponding GDP growth rates would be +0.25 for year $t$, +0.10 for year $t + 1$, and −0.09 for year $t + 2$.

If we were to use GDP growth rate as our independent variable, the resulting correlations would index the association between happiness and the economic growth rate, instead of income level in general. Such an analysis

would lead to different conclusions. For instance, GDP growth rate for the years covered by Easterlin's 1974 data were as follows—1947: 14.27%, 1948: 7.84%, 1952: 6.90%, 1956: 5.37%, 1963: 6.80%, 1966: 7.99%, 1970: 4.88%. If Easterlin had analyzed growth rate instead of GDP per capita, he would not have been puzzled because the economic growth rate went down significantly during this period, and a stable ratio of "very happy" Americans as the growth rate went down might not have been particularly interesting. What was surprising was that happiness levels did not change from 1947 when GDP per capita was $13,407 (in current dollars) to 1970 when GDP per capita rose to $22,996. In terms of absolute income, Americans in 1970 were almost twice as rich as Americans in 1947, yet they did not become happier. This is what Easterlin called a paradox.

We obtained Gini coefficients from the United Nations University World Institute for Development Economics Research (UNU-WIDER; 2015) World Income Inequality Database. This database covers a longer period of time than the World Bank income-inequality data, which goes back to only 1984 for the countries included in this study. It should be noted, however, that the UNU-WIDER data and the World Bank income-inequality data are very similar for the 50 data points covered by both databases (the same year, the same country; $r(48) = .724$, $p < .0001$; UNU-WIDER: $M = 31.26$, $SD = 4.09$; World Bank: $M = 31.52$, $SD = 4.33$), paired $t(49) = 0.596$, $p = .554$, $d = 0.06$.

We used multilevel modeling because the data were nested within nations (conceptually the same as fixed regression). The model was as follows:

$$LS_{ij} = \gamma_{00} + \gamma_{10} \times GDP_{ij} + \gamma_{20} \times Gini_{ij}$$
$$+ \gamma_{30} \times (GDP \times Gini_{ij}) + u_{0j} + r_{ij},$$

where mean life satisfaction (LS) of a nation $j$ in year $i$ was predicted by standardized ($z$-scored) log-transformed GDP per capita, $z$-scored Gini coefficient, and their interaction term. GDP per capita and the Gini coefficient were both standardized around each nation's mean. Consequently, the regression coefficient for GDP per capita indicates the association between life satisfaction and deviations from a nation's mean GDP per capita, and the regression coefficient for the Gini coefficient indicates the association between life satisfaction and deviations from a nation's mean level of inequality over the period covered by the data. The error term within a nation $j$ across years is $r_{ij}$, and the error term between nations is $u_{0j}$.

### Results

Figure 2 shows the correlations between mean life satisfaction and log-transformed GDP per capita for each country. The results showed that when nations' GDP per
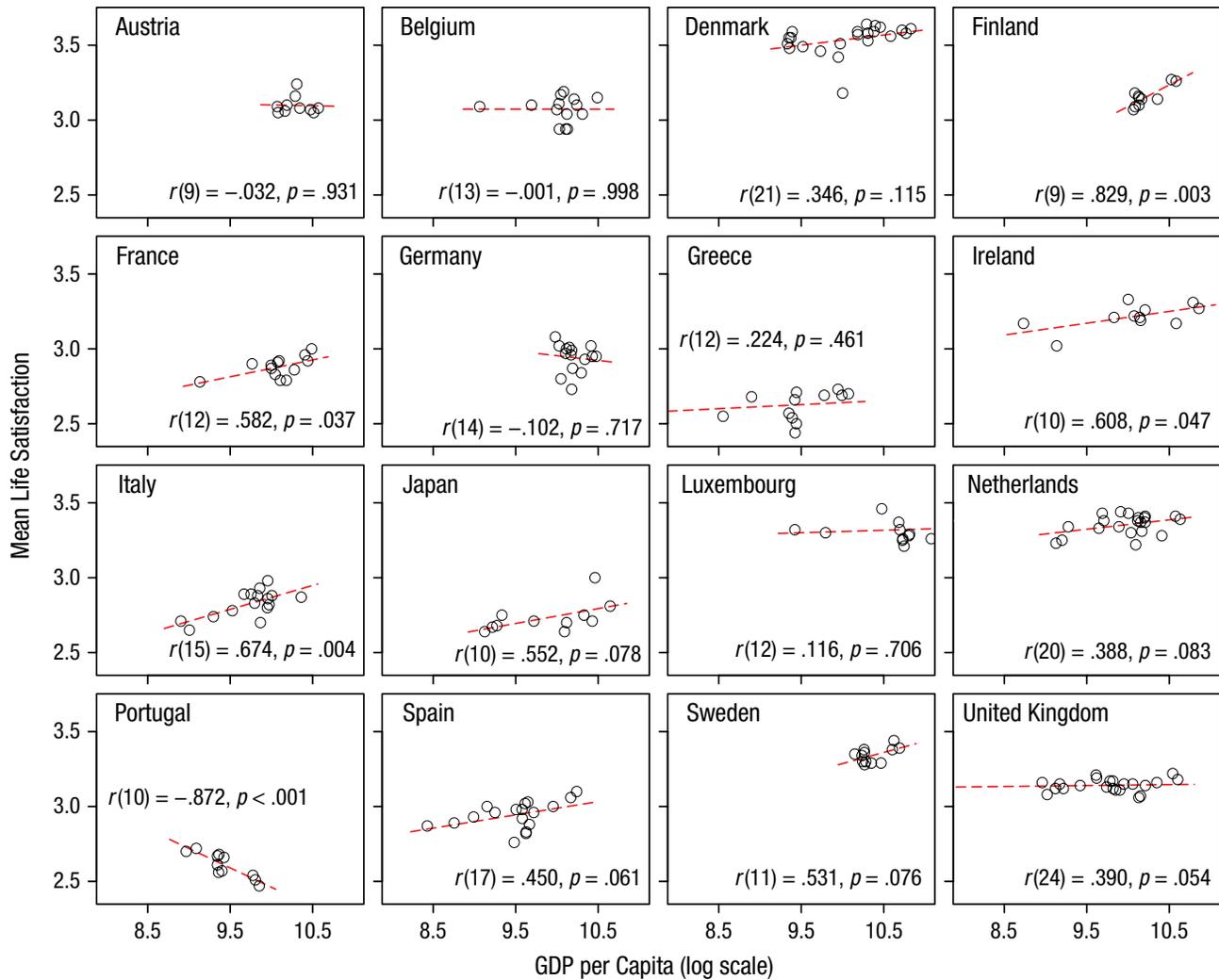
**Fig. 2.** Results from Study 1: scatterplots (with best-fitting regression lines) showing the relationship between mean life satisfaction and log-transformed gross domestic product (GDP) per capita, separately for 16 developed nations. Data on life satisfaction were taken from the World Database of Happiness (Veenhoven, 2015). GDP per capita data were taken from the World Development Indicators online database (World Bank, 2009).

capita and Gini coefficient were at their average levels, the mean life-satisfaction score was 3.041 on a scale of 1 to 4. As predicted, people were less satisfied with their lives in the years with higher income inequality when we controlled for GDP per capita, $\gamma_{20} = -0.0225$, $SE = 0.00606$, $t(216) = -3.712$, $p < .001$. An increase of 1 standard deviation in a nation's income inequality was associated with a 0.0225-point decrease in life satisfaction. This finding replicates earlier findings from the United States (Oishi et al., 2011) in a much larger data set, showing that greater income inequality within a country is associated with lower happiness.

Contrary to the Easterlin paradox, our results showed that mean life satisfaction was higher in the years when GDP per capita was higher, $\gamma_{10} = 0.014439$, $SE = 0.005203$, $t(216) = 2.775$, $p = .006$, after we controlled for income

inequality. An increase of 1 standard deviation in a country's GDP per capita was associated with a 0.014439 increase in life satisfaction. That is, once the detrimental effect of income inequality was controlled for, economic growth within a nation was typically associated with increased life satisfaction.

Most central to our hypothesis, we found a significant negative interaction between GDP per capita and Gini coefficients in predicting life satisfaction, $\gamma_{30} = -0.014186$, $SE = 0.005782$, $t(216) = -2.454$, $p = .015$. A simple-slopes analysis showed that when income inequality was small (1 $SD$ below the mean), an increase of 1 standard deviation in GDP per capita was associated with a 0.0286 increase in life satisfaction. In contrast, when income inequality was large (1 $SD$ above the mean), an increase in GDP per capita was virtually unrelated to life

satisfaction (an increase of 1 standard deviation in GDP per capita was associated with a 0.0002 increase in life satisfaction). Thus, even within the same nation, the relation between economic growth and citizens' life satisfaction was shown to change as a function of income inequality.

## Discussion

Study 1 supported our hypothesis. Economic growth was more strongly associated with increases in life satisfaction when there was less income inequality. One limitation of Study 1 is that the 16 nations we studied are a relatively homogeneous set of economically advanced nations. Thus, we next tested whether we could replicate our findings in a dissimilar group of nations.

## Study 2: Latinobarómetro Data

### Method

The Latinobarómetro is a representative public opinion survey conducted annually in 18 Latin American countries (Argentina, Bolivia, Brazil, Colombia, Costa Rica, Chile, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela) and Spain. The Latinobarómetro surveys used the same life-satisfaction item and 4-point response scale in 2001 and then from 2003 to 2009. Unlike the World Database of Happiness, Latinobarómetro (2013) consists of respondent-level data instead of average values for each nation. Both the GDP per capita data and Gini coefficients were taken from World Bank World Development Indicators database (World Bank, 2009). Spain was excluded in the analyses because it was included in Study 1 and had only 4 years of relevant data in Latinobarómetro.

### Results

Figure 3 shows the correlations between mean life satisfaction and log-transformed GDP per capita for each country. We fitted the same multilevel model as in Study 1. Across the 18 nations included in Latinobarómetro, the mean life-satisfaction score was 2.9618 when GDP per capita and the Gini coefficient were at their average levels for each nation. The association between the Gini coefficient and life satisfaction was similar to what we found in Study 1. Namely, an increase of 1 standard deviation in the Gini coefficient was associated with a 0.005-point decrease in life satisfaction, $\gamma_{20} = -0.005$, $SE = 0.00279$, $t(126667) = -1.833$, $p = .067$. Thus, we successfully replicated our Study 1 findings among these 18 Latinobarómetro nations as well as the findings from the

U.S.-based study of income inequality and happiness we reported previously (Oishi et al., 2011).

When we controlled for Gini coefficients, GDP per capita was negatively associated with life satisfaction, $\gamma_{10} = -0.0106$, $SE = 0.00284$, $t(122002) = -3.737$, $p < .001$. An increase of 1 standard deviation in GDP per capita was associated with a 0.0106 decrease in life satisfaction. Consistent with our hypothesis, however, there was again a negative interaction between GDP per capita and Gini coefficient, $\gamma_{30} = -0.00615$, $SE = 0.00289$, $t(126667) = -2.125$, $p = .034$. This time, a simple-slopes analysis showed that when income inequality was relatively small (1 $SD$ below the mean), an increase of 1 standard deviation in GDP per capita was associated with a 0.0045 decrease in life satisfaction. But when income inequality was relatively large (1 $SD$ above the mean), an increase of 1 standard deviation in GDP per capita was associated with a larger decrease (0.0168 points) in life satisfaction.

We also ran a multilevel analysis, in which we included several individual-level variables (gender, age, marital status, chief-income-earner status, and education). Including individual-level controls did not substantially change the findings for Gini coefficients ($\gamma_{20} = -0.0071$, $SE = 0.00278$), $t(125833) = -2.566$, $p = .010$, for GDP per capita ($\gamma_{10} = -0.00902$, $SE = 0.002830$), $t(125833) = -3.187$, $p = .001$, or for their interaction ($\gamma_{30} = -0.006088$, $SE = 0.002881$), $t(125833) = -2.113$, $p = .035$ (see the Supplemental Material available online for full results).

## Comparison of Studies 1 and 2

In both studies (16 developed nations and 18 Latinobarómetro nations), citizens' life satisfaction was on average lower in years of greater income inequality. In both sets of analyses, we found a significant interaction between GDP per capita and the Gini coefficient; specifically, the effect of increases in GDP per capita was aggravated by income inequality: Within a country, an increase in GDP per capita was associated with lower life satisfaction when income inequality was higher.

In both studies, we found evidence that economic growth had a less positive and more negative effect on happiness as income inequality increased. However, there was a discrepancy between the two data sets. Among the 16 developed nations, increases in GDP per capita were associated with significant increases in life satisfaction after we controlled for inequality. But among the 18 Latin American nations, increases in GDP per capita were associated with significant decreases in life satisfaction.

How can we explain these divergent findings? One possible explanation concerns the different average levels of inequality in the two sets of nations. The mean Gini coefficient of the 16 advanced nations was 30.65 ($SD =$
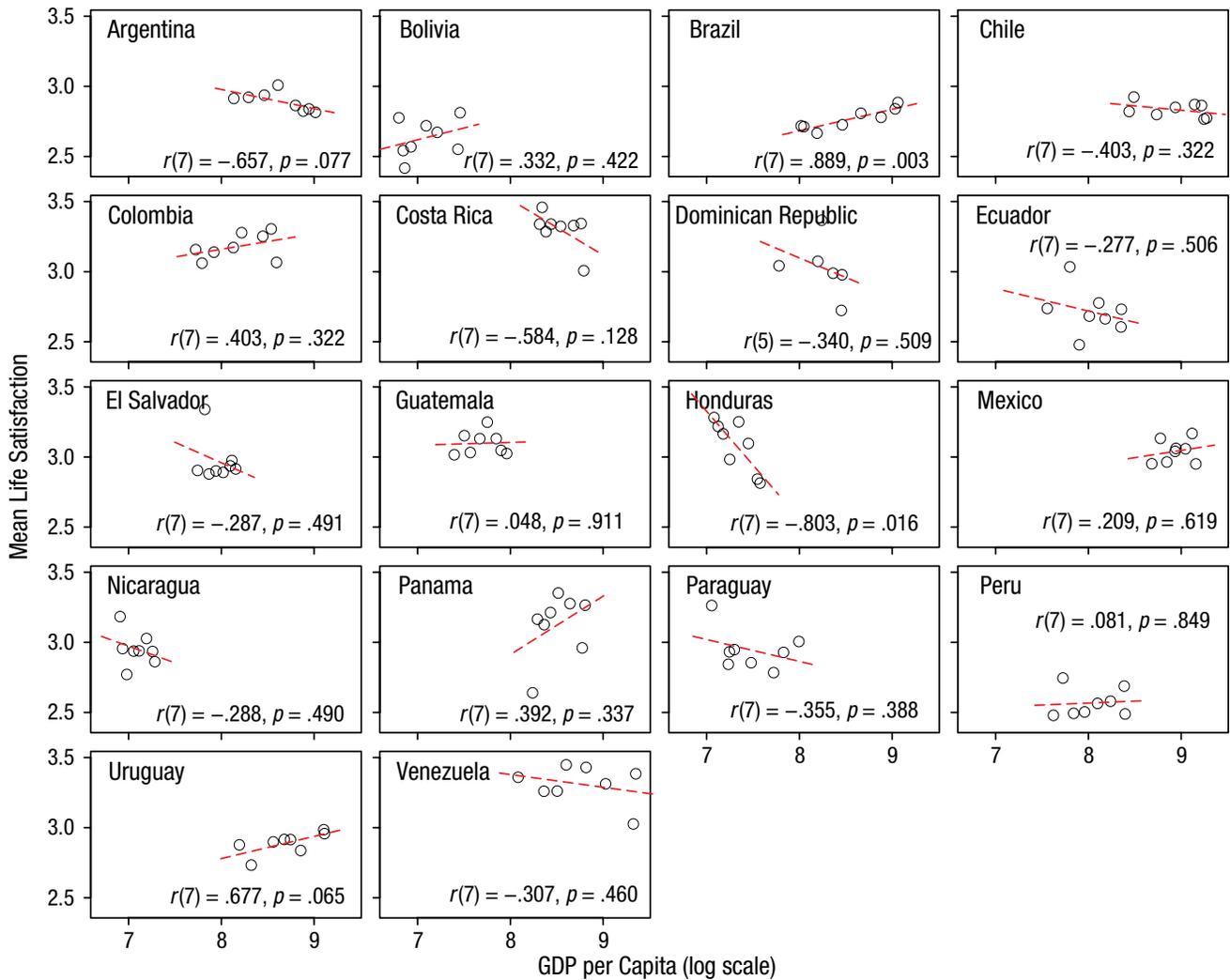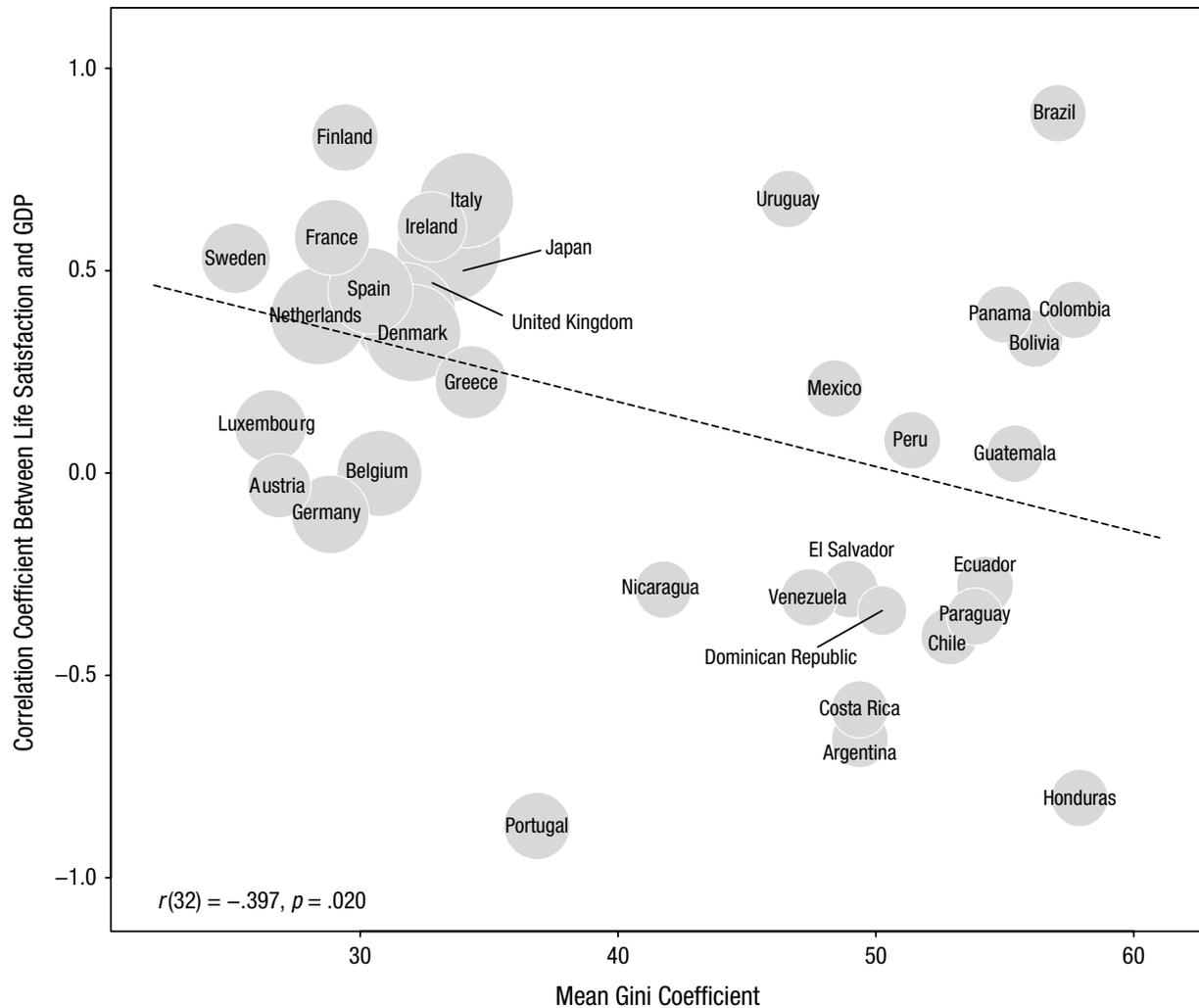
**Fig. 3.** Results from Study 2: scatterplots (with best-fitting regression lines) showing the relationship between mean life satisfaction and log-transformed gross domestic product (GDP) per capita, separately for 18 economically diverse nations. Data on life satisfaction were taken from the Latinobarómetro (2013) database. GDP per capita data were taken from the World Development Indicators online database (World Bank, 2009).

3.20; 95% confidence interval, or CI = [29.21, 32.25]). Thus, even in years of relatively large income inequality, gains in national wealth were distributed fairly evenly across different income brackets. In contrast, the mean Gini coefficient among the 18 Latinobarómetro nations was large ($M = 51.87$, $SD = 4.43$, 95% CI = [49.74, 53.81]), $t(32) = -15.82$, $p < .001$. This means that even in years of relatively low income inequality, gains in national wealth were still concentrated among a small portion of elites in the Latin American nations.

Indeed, results were consistent with our hypothesis: Across 34 nations, the within-nation correlation between log-transformed GDP per capita and life satisfaction was larger in nations with less income inequality than in nations with more income inequality—with raw data: $r(32) = -.349$, $p = .043$; with the number of observations weighted: $r(32) = -.397$, $p = .020$ (see Fig. 4).

A second possible explanation concerns the different levels of average income in the two sets of nations. The advanced nations were significantly wealthier than the Latinobarómetro nations; mean log-transformed GDP per capita was equal to 10.04 ($SD = 0.35$; the equivalent of $22,925) in Study 1, whereas mean log-transformed GDP per capita was equal to 8.16 ($SD = 0.62$; the equivalent of $3,498) in Study 2, $t(27.46) = 11.07$, $p < .001$. Across the 34 nations, average log-transformed GDP per capita was positively associated with the within-nation correlation between log-transformed GDP per capita and life satisfaction—with raw data: $r(32) = .385$, $p = .025$; with the number of observations weighted: $r(32) = .382$, $p = .026$. That is, the size of the correlation coefficient between GDP per capita and life satisfaction over time (shown in Figs. 2 and 3; e.g., $r = .081$ for Peru; $r = .674$ for Italy) was larger in wealthier nations than in poorer nations.

**Fig. 4.** Scatterplot (with best-fitting regression line) showing the relationship of each nation's correlation coefficient between life satisfaction and gross domestic product (GDP) per capita with its mean Gini coefficient, weighted by the number of observations. Results are shown for all 34 nations included in Studies 1 and 2. Gini coefficients for the countries covered in the data set from Study 1 were obtained from the United Nations University World Institute for Development Economics Research (UNU-WIDER; 2015) World Income Inequality Database. Because this database features multiple data points for each year in a given country, we selected coefficients to maximize consistency within a country and minimize variation across countries. The Gini coefficients for the countries in Study 2 were obtained primarily from the World Development Indicators database (World Bank, 2009). Missing cells were filled in from the UNU-WIDER World Income Inequality Database and the Central Intelligence Agency (2013) World Factbook. The area of the bubbles is scaled to the weight of the data point in the regression, as given by the number of observations.

To test whether one of these differences could account for the opposite direction of the relationship between societal income and life satisfaction in the two data sets, we conducted a weighted regression analysis, predicting within-nation correlation coefficients between log-transformed GDP per capita and life satisfaction. The predictors in the equation were nations' mean Gini coefficient and mean log-transformed GDP per capita during the study period. The weight was the number of observations for each country divided by the total number of observations. We used weighted regression because some correlations were much more precise than others. Perhaps because mean Gini and mean log-transformed GDP per capita were highly inversely

correlated, $r(32) = -.89$, $p < .001$ (a multicollinearity problem; tolerance = .185, variance inflation factor = 5.409), neither income inequality, $\beta = 0.064$, $t(31) = 0.171$, $p = .866$, nor mean GDP per capita, $\beta = 0.510$, $t(31) = 1.369$, $p = .181$, uniquely predicted cross-national variation in the within-nation correlation.

## General Discussion

Using two longitudinal data sets from 34 countries, we examined one of the most puzzling findings in the social sciences over the past half century, namely why economic growth within a country does not always translate into an increase in happiness. So far, the debate on the

Easterlin paradox has focused on whether or not the phenomenon exists (Easterlin et al., 2010; Stevenson & Wolfers, 2008). Our analyses demonstrate that once one considers income inequality, the Easterlin paradox is not so paradoxical anymore. When economic growth is more evenly distributed across the population, the Easterlin paradox rarely emerges. Yet when economic growth is concentrated among a small segment of the population, it is more likely to emerge, and economic growth is not associated with an increase in life satisfaction.

There are many psychological mechanisms that may account for this effect. One is that ordinary people may not feel the benefit of economic growth when inequality rises and may instead feel that a small group of individuals are unfairly benefiting from growing national wealth (Oishi et al., 2011; Twenge et al., 2014). Alternatively, when inequality is high and people are exposed to the increasing wealth of others, they may focus more on their relative economic standing and less on their absolute standing (for the aversive effects of social comparison, see Schwartz et al., 2002). It is important to explore the underlying psychological mechanisms in the future.

There are some limitations of the current analyses. First, our analyses (like most previous research of this sort) relied on a single-item measure of life satisfaction. Thus, measurement error is a concern. As more well-being measures become available in large-scale surveys, it will be possible to statistically correct for measurement error. Second, because we were interested in changes in national wealth over time, the number of available data points was limited. It is important to reexamine this issue as more data accumulate in the future. Third, this type of correlational research has third-variable problems. That is, other factors associated with income inequality might explain cross-national variations in the Easterlin paradox that further research may test.

Despite some limitations, our findings provide one answer to why the Easterlin paradox is observed in some nations but not in others. For a nation's life satisfaction to increase, producing more wealth is not sufficient. The fair distribution of the added wealth may critically determine whether life satisfaction will rise on the whole. On the basis of our findings, it is safe to say that if income and happiness go together, it is when income is distributed evenly. Even growth is happy growth, and uneven growth is unhappy growth. Considering the recent trend of growing income inequality in many parts of the world (Piketty, 2014; Stiglitz, 2012), our findings suggest that more instances of the Easterlin paradox will be observed, with economic growth not necessarily increasing the happiness of a country's citizens.

## Author Contributions

S. Oishi developed the study concept with S. Kesebir. S. Kesebir gathered and prepared the data and performed some of the preliminary data analyses. S. Oishi analyzed the data reported in the manuscript. S. Kesebir provided the figures. S. Oishi drafted the manuscript, and S. Kesebir revised it. Both authors approved the final version of the manuscript.

## Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

## Supplemental Material

Additional supporting information can be found at http://pss .sagepub.com/content/by/supplemental-data

## Open Practices

All data have been made publicly available via Open Science Framework and can be accessed at https://osf.io/gsxr6. The complete Open Practices Disclosure for this article can be found at http://pss.sagepub.com/content/by/supplemental-data. This article has received the badge for Open Data. More information about the Open Practices badges can be found at https:// osf.io/tvyxz/wiki/1.%20View%20the%20Badges/ and http://pss .sagepub.com/content/25/1/3.full.

## References

Alesina, A., Di Tella, R., & MacCulloch, R. (2004). Happiness and inequality: Are Europeans and Americans different? *Journal of Public Economics*, *88*, 2009–2042.

Brazil lowers growth forecast to 0.9 pct. (2014, September). *Xinhua*. Retrieved from http://news.xinhuanet.com/ english/business/2014-09/23/c_133664609.htm

Central Intelligence Agency. (2013). The world factbook: Distribution of family income - Gini index. Retrieved from https://www.cia.gov/library/publications/resources/the-world-factbook/rankorder/2172rank.html

China sets 2014 GDP growth target at 7.5%. (2014, March). *CNBC*. Retrieved from http://www.cnbc.com/2014/03/04/ china-sets-2014-gdp-growth-target-at-75.html

Diener, E., & Oishi, S. (2000). Money and happiness: Income and subjective well-being across nations. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 185–218). Cambridge, MA: MIT Press.

Diener, E., Tay, L., & Oishi, S. (2013). Rising income and the subjective well-being of nations. *Journal of Personality and Social Psychology*, *104*, 267–276.

Di Tella, R., & MacCulloch, R. (2010). Happiness adaptation beyond basic needs. In E. Diener, D. Kahneman, & J. F. Helliwell (Eds.), *International differences in well-*

*being* (pp. 217–246). New York, NY: Oxford University Press.

Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2003). The macroeconomics of happiness. *Review of Economics and Statistics, 85*, 809–827.

Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P. A. David & W. R. Melvin (Eds.), *Nations and households in economic growth* (pp. 89–125). New York, NY: Academic Press.

Easterlin, R. A. (2005). Feeding the illusion of growth and happiness: A reply to Hagerty and Veenhoven. *Social Indicators Research, 74*, 429–443.

Easterlin, R. A., McVey, L. A., Switek, M., Sawangfa, O., & Zweig, J. S. (2010). The happiness–income paradox revisited. *Proceedings of the National Academy of Sciences, USA, 107*, 22463–22468.

Hagerty, M. R., & Veenhoven, R. (2003). Wealth and happiness revisited: Growing national income *does* go with greater happiness. *Social Indicators Research, 64*, 1–27.

Latinobarómetro. (2013). [Data files]. Retrieved from http://www.latinobarometro.org/latContents.jsp

Mankiw, N. G. (2014). *Principles of macroeconomics*. Stamford, CT: Cengage Learning.

Napier, J. L., & Jost, J. T. (2008). Why are conservatives happier than liberals? *Psychological Science, 19*, 565–572.

Oishi, S., Kesebir, S., & Diener, E. (2011). Income inequality and happiness. *Psychological Science, 22*, 1095–1100.

Piketty, T. (2014). *Capital in the twenty-first century*. Cambridge, MA: Harvard University Press.

Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002). Maximizing versus satisficing: Happiness is a matter of choice. *Journal of Personality and Social Psychology, 83*, 1178–1197.

Stevenson, B., & Wolfers, J. (2008). Economic growth and subjective well-being: Reassessing the Easterlin paradox (Brookings Papers on Economic Activity). Washington, DC: The Brookings Institution.

Stiglitz, J. E. (2012). *The price of inequality: How today's divided society endangers our future*. New York, NY: W. W. Norton.

Twenge, J. M., Campbell, W. K., & Carter, N. T. (2014). Declines in trust in others and confidence in institutions among American adults and late adolescents, 1972–2012. *Psychological Science, 25*, 1914–1923.

United Nations University World Institute for Development Economics Research. (2015). *World income inequality database* (Version 2.0c). http://www.wider.unu.edu/research/Database/en_GB/wiid/

United States Census Bureau. (2014). Historical income tables: Income inequality. Retrieved from https://www.census.gov/hhes/www/income/data/historical/inequality

Veenhoven, R. (2015). *World database of happiness* [Database]. Retrieved from http://worlddatabaseofhappiness.eur.nl/

Wilkinson, R. G., & Pickett, K. E. (2009). Income inequality and social dysfunction. *Annual Review of Sociology, 35*, 493–511.

World Bank. (2009). GDP per capita (current US$). In *World development indicators* [Database]. Retrieved from http://data.worldbank.org/indicator/NY.GDP.PCAP.CD