Economic Inequality, Trust, and Brand Leadership

Joshua T. Beck, Colleen Harmeling, Yashoda Bhagwat, and Conor M. Henderson
Report Summary

Many leading brands have lost value in recent years, despite economic growth, which suggests some common obstacle is impeding brand performance. Prior research has examined how economic fluctuations impact brands (e.g., recession increases demand for private label brands). However, little is known about how economic inequality, which has been rising across the U.S. for four decades, may affect brand leaders.

In this report, Joshua Beck, Colleen Harmeling, Yashoda Bhagwat, and Conor M. Henderson consider how economic inequality affects brand performance. Specifically, the authors theorize that inequality reduces trust in the economic system, which subsequently erodes trust and performance of brands that seem to wield influence over system-level outcomes (i.e., brand leaders). The authors test these predictions using a four-study, multimethod approach involving field data and controlled experiments.

Findings

The first study uses matched data from 8,790 customers who rated over 1,500 brands across 469 major U.S. cities to demonstrate that, holding market size and customer income constant, city-level economic inequality negatively relates to brand trust and performance, especially as brand leadership increases. Customers reported lower trust, fewer past purchases, and lower future purchase intentions for brand leaders as inequality increased, eroding brand leaders’ performance advantage by as much as 28%.

In a second study where perceptions of (high vs. low) inequality were experimentally altered, the authors find that the negative effect of economic inequality on brand leader performance is bridged by a macro-to-micro trust process, such that: higher economic inequality → lower system trust → lower brand trust → worse brand leader performance.

A third study examines how a brand leader may restore trust and performance by fostering beliefs that the brand is fixing rather than contributing to unfavorable economic conditions. The authors experimentally altered perceptions of inequality, and then recorded trust, purchase intentions, and willingness to pay for a brand leader that (a) sponsored an initiative that signaled economic goodwill by helping low income individuals, (b) sponsored an initiative that signaled non-economic goodwill by helping the environment, or (c) did not sponsor an initiative (as a control). The authors found that signaling economic goodwill (vs. non-economic goodwill or no signal) significantly restored brand leader trust and performance that was otherwise eroded by high inequality. Interestingly, the economic goodwill initiative had negative effects when inequality was low, suggesting that customers may not value such programs where there is no apparent need.

Finally, a fourth study examines the causal role of leadership by experimentally manipulating both perceptions of local economic inequality and perceptions of brand leadership to test their interactive effects on brand trust and performance. The authors replicated the findings above; inequality reduced trust and performance for a leading brand. Also, unexpectedly, the authors found that higher economic inequality increased trust and performance for a non-leading brand.
**Managerial implications**

By directing attention toward the macroeconomic environment, the authors offer an explanation—rising inequality—for widespread reductions in the performance of leading brands. These results show that local levels of economic inequality impair the performance advantage usually afforded to brand leaders because inequality reduces trust in the economic system, which undermines trust in leading brands. Moreover, the results suggest that to avoid potential impairments caused by high levels of inequality, brand leaders might consider de-emphasizing leadership and implementing initiatives that foster perceptions of economic goodwill. Also, because customers do not value an economic goodwill program when inequality is low, and inequality varies considerably across U.S. cities, these findings underscore the importance of tailoring community investments specifically to local market conditions.

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Building a leading brand has always been a challenge (Aaker 2014), but maintaining a valuable brand also has become increasingly difficult. Even strong brands such as Gap, J.Crew, and Walmart have withered despite broader economic growth (O’Connor 2016). Indeed, the Marketing Science Institute (2016) lists understanding distrust of big brands among its 2016-2018 research priorities. Although each brand faces unique obstacles, a recent study of corporate acquisitions indicates a universal decline in the market value of brands by as much as 50% in the past two decades (Binder and Hanssens 2015), suggesting that some common obstacle is impeding the performance of many brands. We examine economic inequality as one such widespread obstacle to brand performance.

Economic inequality has been rising in the United States over the past four decades; as inequality increases, people become less trusting of others and the economic system in general (Oishi, Kesebir, and Diener 2011; Twenge, Campbell, and Carter 2014). We propose that the erosion of trust in the economic system, caused by inequality, disproportionately weakens the performance of leading brands. A wealth of marketing scholarship examines exchange-level factors (e.g., brand expertise, communication, product quality) that affect brand trust and performance (Aaker 2014; Erdem and Swait 2004; Palmatier et al. 2006). With this investigation, we instead draw attention to how the structural characteristics of the economy, such as inequality, facilitate or undermine brand leader performance through the erosion of trust.

Recent psychology research demonstrates that higher inequality correlates with lower levels of trust in the economic system, because inequality makes the system seem less fair (Twenge, Campbell, and Carter 2014). If system trust theory holds, reduced trust in the economic system lowers trust in the brands that are part of that system (Grayson, Johnson, and Chen 2008; Hansen 2012). We build on this theory by proposing that the position of a brand within the
economic system shapes the transfer of system- to brand-level trust. Specifically, because leading brands are perceived to wield more influence over the economic system (Aaker 2014; Boulding and Staelin 1990; Podolny 1993; Stahl et al. 2012), reductions of system trust may disproportionately affect trust in leading brands, which seem to be contributing to or benefiting from that unfair system. In conditions of high inequality, brand leaders also might be able to dispel these beliefs and restore trust by signaling economic goodwill, such that they might reclaim the performance advantages generally afforded to leading brands.

We test these predictions in four studies. In Study 1 we use real-world data—city-level indicators of economic inequality from across the United States, merged with customer-level brand purchase behaviors, purchase intentions, and brand perceptions—to test whether inequality at a city level reduces brand trust and performance more with greater brand leadership. Then in Studies 2 and 3, we hold leadership constant and examine how inequality affects brand leader performance. In Study 2 we test the macro-to-micro link between inequality and brand performance by manipulating inequality; measuring system trust, brand trust, and brand performance; and testing for serial mediation (inequality → system trust → brand trust → brand performance) for a leader brand (Walmart). Then in Study 3, we examine experimentally whether signaling economic goodwill can undo the negative effects of inequality on the performance of a different brand leader (Starbucks). Finally, Study 4 verifies the causal roles of both inequality and brand leadership (vs. other brand attributes), by using a fictitious brand in an experiment in which we manipulate perceptions of economic inequality and brand leadership and test their effects on brand trust and performance.

Ultimately, our findings contribute to marketing theory and practice in three main ways. First, this article is the first marketing contribution that embraces an economy-wide perspective
on brand trust, which helps explain pervasive brand devaluations by linking brand performance to rising inequality. We complement literature focused on the individual customer experience (Verhoef et al. 2009) by seeking to understand how economic conditions affect brand performance, beyond consumer purchasing power (Stremersch and Tellis 2004). Study 1 reveals that leaders’ performance advantage over other brands (i.e., customers who recently purchased the leading brand) eroded by as much as 28% in cities with high levels of economic inequality, when we hold market size and consumer income constant. This effect of economic inequality on leader performance arises due to a shift in brand perceptions (i.e., brand trust), suggesting that brand managers, who focus mainly on inequality insofar as it affects middle markets (“the middle class squeeze”; Rivkin et al. 2015), may have additional causes for concern.

Second, we contribute to system trust theory by formalizing which actors (i.e., brand leaders) are most likely affected by changes in system trust. This expansion of system trust theory accounts for leadership asymmetry in the transfer of system trust to brand trust (Grayson, Johnson, and Chen 2008). According to Study 1, the decline in brand trust associated with increasing levels of inequality is five times greater for brands perceived as high (vs. low) in leadership; the serial mediation in Study 2 also demonstrates the macro-to-micro transfer of system to brand trust for a brand leader. With Study 4 we also find that inequality reduces trust in a fictitious brand but only if it is framed as a leader brand. Thus, evidence across our studies indicates that brand leadership, which is generally desirable (Boulding and Staelin 1990; Stahl et al. 2012), increases vulnerability to the erosion of system trust.

Third, we empirically demonstrate the impact of economic inequality on brand performance, and we provide a framework for addressing its negative effects. Because inequality raises the specter of brand leader culpability, marketing strategies that signal economic goodwill
can mitigate the negative effects of high inequality. Study 3 indicates that high (vs. low) inequality reduces trust in a brand leader by 13%, but an initiative that signals economic goodwill recovers 81% of this eroded trust. Similarly, 93% of eroded performance (i.e., purchase intentions) is recoverable via an economic goodwill program. Because customers do not value an economic goodwill program when inequality is low, and inequality varies considerably across U.S. cities, our findings underscore the importance of tailoring community investments specifically to local market conditions.

**Economic Inequality and Brand Performance**

Economic inequality refers to the concentration of income or wealth in a given population (Heathcote, Perri, and Violante 2010; Stremersch and Tellis 2004). Developmental economic theory predicts that inequality initially should rise as economies develop and fall as they mature (Chen 2003; Kuznets 1955). Newly available data challenge this expectation; within-country inequality (e.g., in the United States) is on the rise (Heathcote, Perri, and Violante 2010; Piketty 2014). Accordingly, psychologists and sociologists increasingly are interested in the outcomes of inequality, such as self-enhancement (Walasek and Brown 2015), happiness, life satisfaction (Oishi, Kesebir, and Diener 2011), and power asymmetries (Lin and Tomaskovic-Devey 2013). In marketing though, inequality has received less attention, with the exceptions of a study linking it to increased demand for luxury goods (Ordabayeva and Chandon 2011) and another study noting less demand more generally because fewer customers can afford certain products (Stremersch and Tellis 2004).

This latter effect (i.e., the middle class squeeze) represents managers’ main concern thus
far with rising inequality. Two-thirds of business leaders consider reducing inequality a higher priority than increasing economic growth (Rivkin et al. 2015). With this investigation, we answer calls to examine inequality more fully (e.g., Beck, Chapman, and Palmatier 2015) by considering how it affects the perceptions and ultimately the performance of brands. This investigation is critical, considering the gradual decline in the value of brands relative to other marketing assets in recent decades that may be attributable partially to rising inequality (Binder and Hanssens 2015). To understand how inequality may affect performance, we first consider trust structures within a market.

**Economic inequality and levels of trust**

Brand performance is predicated on trust. Trust is the “subjective probability with which an actor assesses that another actor or group of actors will perform a particular action … before she or he can monitor such action” (Adler 2001, p. 217). Brands represent the past actions and future intentions (i.e., beneficence) of constituent sellers, such that they serve as signals of trustworthiness. Trust orients, enables, and constrains economic behavior in ways that discourage opportunism, increases commitment, and encourages collaboration (Jap and Ganesan 2000; Palmatier et al. 2006; Williamson 1993).

Trust exists at two fundamental levels: system and actor (e.g., brand). According to system trust theory (Grayson, Johnson, and Chen 2008; Hansen 2012), system trust is broader in scope and refers to impersonal structures, such as economic institutions, that “enable one to anticipate a successful future endeavor” (Pennington, Wilcox, and Grover 2003, p. 199); it legitimizes brand trust. A comparison of the U.S. and Russian markets provides a useful illustration of system trust. Because the U.S. economic system is trusted more than the Russian one, brands in Russia have greater difficulty forming trust-based relationships with customers.
(Guseva and Rona-Tas 2001). That is, trust in U.S. (vs. Russian) brands is augmented by the greater trust in the U.S. economic system. Factors that undermine system trust accordingly should reduce brand trust (Grayson, Johnson, and Chen 2008).

Correlational evidence suggests that economic inequality undermines system trust (Oishi, Kesebir, and Diener 2011; Twenge, Campbell, and Carter 2014). Many cultures accept moderate levels of inequality (Oyserman 2006), but unacceptably high levels can be problematic. When “only the rich get richer,” people question the rules, norms, and sanctions that govern the system (Oishi, Kesebir, and Diener 2011, p. 1096). In addition, economic inequality increases the belief that high earners take advantage of others (Anderson and Brown 2010). System trust theory therefore leads us to expect that economic inequality reduces trust in brands that are perceived as part of unfair economic systems, which in turn should hinder brand performance. Simply put, we expect higher inequality → lower system trust → lower brand trust → lower brand performance.

**The moderating role of brand leadership**

We also consider carefully whether inequality similarly affects all brands. If markets lacked structure, we might expect system trust to diffuse uniformly. However, a prevailing marketing view suggests that markets are structured in a power hierarchy, with leading brands positioned at the top (Podolny 1993). Brand leadership is rightfully desired (Aaker 2014). Leader brands enjoy greater negotiating power, set industry standards and lobbying agendas, get free publicity in the press and other (e.g., academic) settings, and earn higher market shares (Boulding and Staelin 1990; Podolny 1993; Stahl et al. 2012). However, brand leaders also receive closer scrutiny (Thompson and Arsel 2004).

Because of their perceived power and influence over the economy, the responsibility for the state of the system as a whole mainly falls on brand leaders. According to attribution theory,
when people seek to explain undesirable conditions, they disproportionately implicate leaders, instead of less powerful agents, for contributing to or failing to prevent undesirable conditions (Gibson 2003; Hamilton 1980). We posit that when the economic system seems unfair, trust in brand leaders (vs. non-leaders) declines the most. In summary, high inequality should reduce system trust, which then reduces brand trust and performance, especially as perceptions of brand leadership increase. Formally, we predict:

**H1:** Brand leadership moderates the negative effect of economic inequality on brand performance, such that the negative effect of inequality on brand performance is strengthened as brand leadership increases.

**H2:** At high levels of brand leadership, trust mediates the negative effect of inequality on performance through a serial mediation process, such that (a) brand trust mediates the negative effect of inequality on brand performance, and (b) system trust mediates the negative effect of inequality on brand trust.

**Signaling to regain trust and undo the negative effects of inequality**

If our theory is valid, that brand leaders are trusted less due to perceptions that they potentially contributed to or failed to counter an unfair system characterized by high inequality, then information that a brand leader is actually using its influence to improve economic conditions should restore trust. According to signaling theory, brands can use marketplace actions, such as brand alliances (Rao, Qu, and Ruekert 1999) or corporate social responsibility (CSR) (Kang, Germann, and Grewal 2015), to communicate intent. Signaling is effective when customers lack information about brands’ true intentions and when signals are clear, targeted, and easily observed (Connelly et al. 2011). Therefore, we propose that leader brands can restore trust by signaling economic goodwill (i.e., positive rather than negative economic motives; Campbell 1999) through their investments in economic development, which effectively should boost trust if unfavorable local conditions (i.e., high inequality) warrant such actions. On average, community development initiatives fail to improve brand performance (Mishra and
Modi 2016), but we expect economic goodwill initiatives to improve brand leader performance by addressing the root cause of eroded trust when local economic conditions increase the salience of inequality. Thus, we consider how signaling attenuates our proposed effects, which serves as a key test of our proposed process (depicted in Figure 1). Thus, we predict:

**H3:** At high levels of brand leadership, economic goodwill (vs. non-economic or no goodwill) attenuates the negative effect of economic inequality on brand performance.

### Study 1: Testing the Effects of Economic Inequality on Brand Trust and Performance

For Study 1, we compiled a unique data set to map brand evaluations to the local environment and thus offer the first empirical test of whether local economic inequality influences brand performance, while also assessing the moderating role of brand leadership. We matched U.S. customers—characteristics, brand evaluations, and purchase behaviors—to their city’s level of economic inequality. The analyses then tested if economic inequality related negatively to past purchase behaviors and future purchase intentions, especially for brands perceived as leaders (H1), and whether an erosion of brand trust mediated this relationship (H2a).

**Pretest of local inequality perceptions and system trust**

Economic inequality varies across the United States. Similar to previous research that examines the local effects of inequality (Oishi, Kesebir, and Diener 2011), we assume that cues from customers’ local environment inform perceptions of inequality, which reduces trust in the economic system. We pretested this assumption using 98 participants (28 women; median age of 30 years) from Amazon’s Mechanical Turk (AMT), paid $.30 each. These participants rated
local economic inequality (“Economic inequality in my city is very high,” “Economic inequality in my city is higher than in peer cities,” “Income is distributed very unequally in my city”; \( \alpha = .83 \)); system trust with a single-item measure ("How much trust do you have in most businesses?"; Twenge, Campbell, and Carter 2014); system trust with a multi-item measure ("In general, I believe that companies cannot be relied upon to keep their promises" [reversed], “In general, I believe that companies are trustworthy,” “Overall, I believe companies are honest”; \( \alpha = .92 \); Grayson, Johnson, and Chen 2008; Hansen 2012), and Yamagishi’s (1986) five-item (\( \alpha = .71 \)) dispositional trust measure that rates general beliefs (e.g., “Most people are basically honest”). Participants provided ratings on 7-point Likert scales (1 = “strongly disagree,” 7 = “strongly agree,” or for the single-item system trust measure, 1 = “very low trust,” 7 = “very high trust”). Then they provided their age, gender, and household income. A pretest (Table 1) confirmed our expectation that perceptions of local inequality, measured using either a single or multi-item scale, are inversely related to system trust. Thus, we proceeded to the main study.

**Sample**

We constructed our data set from Harris Interactive’s 2013 EquiTrend brand survey and the 2013 American Community Survey made available by the U.S. Census Bureau. The EquiTrend survey solicited responses from more than 35,000 U.S. customers, each of whom provided basic demographic information and answered questions about 40 randomly selected brands for which they were at least moderately familiar. We used respondents’ zip codes to match them to city-level data from the American Community Survey, which provides summary statistics about the largest U.S. cities. After merging these data and dropping respondents who did not live within the limits of a major U.S. city, we had complete data for 159,597 observations.
with brand ratings from 8,970 customers across 469 cities.

**Measures**

*Dependent variables.* Our dependent measures came from the customer-level responses to the EquiTrend survey. Participants rated brand trust (“Please rate the overall level of trust you have for each of the following brands”) on an 11-point scale (0 = “this is a brand that I do not trust at all,” 10 = “this is a brand I completely trust”) and purchase intentions (“If price were not a consideration, how likely are you to purchase products or services of the following brands in the future?”) using a 4-point scale (1 = “never,” 4 = “absolutely”). They also indicated their purchase behaviors (“Please indicate when was the last time you, or any member of your immediate family/household, purchased/used each of the following brands”), using an ordinal scale that was recoded into a dichotomous variable (1 = “within previous 3 months,” 0 = “not within previous 3 months”). We chose a discrete approach for purchase behaviors to simplify the interpretation of results. For robustness, we verified that the results were consistent for the ordinal scale and different cut-off points for dichotomization (e.g., within previous 6 months).

*Independent variables.* The independent variables of interest were brand leadership and economic inequality. In the 2013 edition of the EquiTrend survey, respondents rated brand leadership (“This brand is a leader compared to its peers in its category/market/industry”) using a 7-point scale (1 = “strongly disagree,” 7 = “strongly agree”). Economic inequality was operationalized as the city-level GINI coefficient, which we retrieved from the American Community Survey. The GINI index ranges from 0 (perfect equality) to 100 (perfect inequality) and is a standard measure of economic inequality for a geographic area (Oishi, Kesebir, and Diener 2011). We mean-centered brand leadership and economic inequality, such that the simple effect of each one at average levels of the other can be interpreted easily from the results.
Control variables. We controlled for customer characteristics: gender (1 = female, 0 = male), age, and income (1 = less than $15,000, 11 = $250,000 or more), which were self-reported in the EquiTrend survey. We also controlled for individual perceptions of brand familiarity, which the respondents rated (“Please rate your familiarity with each of the following brands”) using a 5-point scale (1 = “never heard of the brand,” 5 = “extremely familiar”). If they reported a value of 1 or 2 (“just know the name”), they did not answer any further questions about the brand. Brands with a small market presence then may be underrepresented in this sample, such that we have a conservative test of brand leadership. As another control, participants rated brand quality (“Rate the overall quality of each brand using a 0 to 10 scale”) on an 11-point scale (1 = “unacceptable/poor quality,” 10 = “outstanding/extraordinary quality”). Finally, we controlled for city-level characteristics, such as the population size and median household income, using data retrieved from the American Community Survey. Both were log transformed. Web Appendixes A and B provide more descriptive data and correlations.

Analysis

To understand the relationship between economic inequality, at a city level, and brand performance, at a customer level, we constructed a multilevel model that accounted for the nested data structure: multiple brands evaluated by the same individual and multiple individuals from the same city. Our multilevel specification reduces the potential for biased, inefficient parameter estimates due to uneven representation across respondents and cities and for potential intracluster correlations (Gruca and Rego 2005; Raudenbush and Bryk 2002).

We specified the model at three levels to account for the lack of independence among brands and respondents living in the same city (Raudenbush and Bryk 2002). Level 1 modeled dependent variables (i.e., purchase behaviors, purchase intentions, and brand trust) of brand
from respondent $i$ in city $j$ as a function of brand leadership ($Lead$), quality ($Qual$), familiarity ($Familiar$), and the term for the random and normally distributed evaluation-specific error (Equation 1). That is,

$\begin{equation}
y_{bij} = \pi_{0ij} + \pi_{10j} \times Lead_{bij} + \pi_{20j} \times Qual_{bij} + \pi_{30j} \times Familiar_{bij} + e_{bij} , e_{bij} \sim N (0,\sigma^2_e).
\end{equation}$

Level 2 incorporated the respondents’ characteristics of age, gender, and income through the Level 1 intercept $\pi_{0ij}$, along with unobserved effects of the respondent using the parameter $r_{0ij}$, which represented the normally distributed error specific to each respondent.

$\begin{equation}
\pi_{0ij} = \beta_{00j} + \beta_{010} \times Age_{ij} + \beta_{020} \times Gender_{ij} + \beta_{030} \times Income_{ij} + r_{0ij} , r_{0ij} \sim N (0,\sigma^2_r).
\end{equation}$

Level 3 incorporated city characteristics of the population ($CityPop$), median household income ($CityInc$), and economic inequality ($Inequality$) through the Level 2 intercept $\beta_{00j}$, as well as unobserved effects of the city with the parameter $u_{00j}$, which represented the normally distributed error specific to each city. We also examined the inequality $\times$ brand leader interaction by specifying that the effect of brand leadership $\pi_{10j}$ depends partially on inequality and testing this hypothesis according to the sign and magnitude of $\gamma_{110}$:

$\begin{equation}
\beta_{00j} = \gamma_{000} + \gamma_{001} \times CityPop_{j} + \gamma_{002} \times CityInc_{j} + \gamma_{003} \times Inequality_{j} + u_{00j} , u_{00j} \sim N (0,\sigma^2_u),
\end{equation}$

and

$\begin{equation}
\pi_{10j} = \gamma_{100} + \gamma_{110} \times Inequality_{j}.
\end{equation}$

By combining Equations 1–4, we can estimate our model by maximizing the log-likelihood function with respect to the coefficient vector and variance terms, using a maximum likelihood expected maximization algorithm (Hox 2010; Raudenbush and Bryk 2002). For the dichotomous outcome of purchase behaviors, we adapted our basic model to a generalized mixed-effects logit model with a quasi-likelihood estimation technique, using a Laplace approximation that we
specified at two levels, with error partitioned into evaluation-specific and city-specific forms. We report the model estimates in Table 2.

**Results and discussion**

*Brand performance.* The model results for brand purchase behaviors and purchase intentions reveal the performance implications of economic inequality and brand leadership. A significant inequality × leadership interaction on purchase behaviors ($\gamma_{110} = -.34, p = .007$) provides evidence in support of H1. We decomposed this interaction using spotlight analyses (Spiller et al. 2013) of the simple effect of inequality at 1.5 standard deviations above and below mean brand leadership. This range was selected to represent brands with very high versus moderate levels of market leadership, given that the sample was restricted to brands for which the respondent was at least “somewhat familiar,” so it provided a conservative test of our hypotheses. When brand leadership was high (+1.5 SD), economic inequality had a significant negative effect on purchase behaviors ($\gamma_{003} = -1.28, p = .005$), whereas when brand leadership was low (-1.5 SD), economic inequality did not have any such significant effect ($\gamma_{003} = .22, p = .67$). Similarly, we found a significant inequality × leadership interaction on purchase intentions ($\gamma_{110} = -.06, p = .02$), again in support H1. When we decomposed this interaction, the results revealed that when brand leadership was high (+1.5 SD), economic inequality had a significant negative effect on purchase intentions ($\gamma_{003} = -.41, p = .001$), but when brand leadership was low (-1.5 SD), inequality had no significant effect on purchase intentions ($\gamma_{003} = -.16, p = .18$).

*Mediation by brand trust.* The model results revealed a significant inequality × leadership interaction on brand trust ($\gamma_{110} = -.22, p = .000$). We also decomposed this interaction and found that when brand leadership was high (+1.5 SD), economic inequality had a significant negative
effect on brand trust \( (\gamma_{003} = -1.18, p = .000) \), but when brand leadership was low (-1.5 SD), economic inequality did not have a significant effect \( (\gamma_{003} = -0.19, p = .51) \). This inequality exerted a significant negative effect on brand trust even at average levels of leadership \( (\gamma_{003} = -0.69, p = .01) \), but the slope was 70% steeper for brands at high (vs. mean) levels of leadership. Table 2 provides the model estimates for all outcome variables.

To test whether brand trust mediated the interactive effects of brand leadership and economic inequality on brand performance \( (H_{2a}) \), we conducted a multi-step regression analysis and submitted estimates to a Sobel test. Following Baron and Kenny (1986), we conducted two separate multilevel model analyses: First, we regressed brand trust on economic inequality, brand leadership, and their interaction. Second, we regressed purchase behaviors on brand trust, economic inequality, brand leadership, and the inequality × leadership interaction. Consistent with \( H_2 \), the results of the Sobel test revealed that brand trust mediated the interactive effect of inequality and leadership on purchase behaviors \( \text{(Sobel’s } z = 4.29, p = .000) \). We repeated these analyses with purchase intentions \( \text{(Sobel’s } z = 4.53, p = .000) \) as our dependent variable to provide full support of \( H_{2a} \).

Robustness checks. We tested the robustness of our findings in three ways. First, we confirmed the stability of the effects observed in our main models by dropping each control variable one at a time, then specifying each variable as a moderator of our variables of interest. The direction and significance of our focal effects remained stable. Second, we repeated our analysis after dropping observations from those cities with the greatest and least inequality (i.e., top and bottom 1% of cities in our sample). Despite the smaller sample size, the results remained stable \( (ps < .05) \). Third, we tested three naïve models: (1) a simple ordinary least squares
regression of brand trust on inequality, leadership, and inequality × leadership; (2) the same regression but with purchase intentions as the outcome; and (3) a similar simple logistic regression with purchase behavior as the outcome. All three models yielded significant inequality × leadership interactions and similar patterns of simple effects as reported previously.

Overall, Study 1 documents a critical effect of economic inequality on brand performance and confirms two foundational predictions: The negative effect of economic inequality on brand performance is stronger among brand leaders (vs. non-leaders), and this moderated effect is mediated by brand trust. These preliminary findings provide initial evidence that economic inequality reduces trust in brand leaders and impairs performance. Notably, as Figure 2 illustrates, the usual advantages afforded to brand leaders get eroded by as much as 28% in markets with high inequality. Leadership is generally advantageous (Boulding and Staelin 1990; Stahl et al. 2012), but this finding highlights a considerable vulnerability associated with high levels of leadership. Yet Study 1 is not without limitations; for example, the data were correlational, which limits causal inferences. To overcome this issue and gain more complete evidence about how inequality at a macro level affects brand trust at a micro level, in Study 2 we use an experiment to link inequality, system trust, brand trust, and brand performance. According to our theorizing, inequality reduces trust in the economic system, which in turn affects trust in brand leaders and their performance (H2b).

Study 2: The Macro–Micro Link between Inequality and Brand Leader Performance

Study 1 demonstrates that economic inequality negatively affects brand performance
through an erosion of brand trust, and these effects are stronger for brand leaders. We theorize that inequality, a macroeconomic phenomenon, influences microeconomic decisions about whether to purchase and how much to spend on a brand, through trust structures that link brands to the economic system. In Study 2, we sought evidence to support this macro-to-micro (system trust → brand trust) link. Furthermore, we attempt to rule out the possibility that economic inequality creates an aversion to elite brands targeting high-income consumers, by examining the effect of inequality on Walmart, a cost leader (identified with a pretest). Finally, we included a measure of social desirability in Study 2 to determine whether inequality reduces actual trust or merely makes derogating brand leaders seem socially desirable.

**Method**

*Brand leader pretest.* To isolate leadership from wealth-based status, a conceptually related construct, for this study we chose a brand high in leadership but not in status: Walmart. To pretest our assumptions about Walmart, we recruited (in exchange for $.25), 47 U.S. adults (19 women; median age of 29.50 years) from AMT to rank ten large U.S. retail brands (Walmart, Kroger Co., Costco, The Home Depot, Walgreen, Target, CVS Caremark, Lowes Companies, Amazon.com, and Safeway; presented in random order), first on “leadership (i.e., dominance and control)” (1 = highest leadership, 10 = lowest leadership) and then on status (1 = highest status, 10 = lowest status). A series of Wilcoxon signed-rank tests revealed that Walmart ($M_{\text{rank}} = 2.36$) ranked highest in leadership compared with all other retailers ($|Z|s > 3.54, ps < .001$) except Amazon.com ($|Z|s = .08, ps = .93$), whereas it ranked significantly lower in status ($M_{\text{rank}} = 6.83$) than five brands ($|Z|s > 2.01, ps \leq .05$) and equally low relative to four brands ($|Z|s < 1.57, ps > .12$). That is, Walmart was rated high in leadership but not in status. Having confirmed this prediction, we proceeded to the main study.
Participants. One-hundred twenty-seven U.S. adults (68 women) from AMT completed this study in exchange for compensation ($0.35). The median age was 32 years. The sample size was determined prior to data collection, with the goal of achieving 50–60 participants per cell. The data were screened for any partial responses. Two study participants submitted responses with more than one item left blank; excluding them had no material effect on the significance of the results, so these partial responses were retained.

Procedure. Participants were randomly assigned to one of two conditions (inequality: high vs. low). Under the guise of separate studies, participants first completed the inequality manipulation task. We manipulated perceptions of inequality using a false feedback paradigm, consistent with prior research on the psychological effects of economic distribution (Messick et al. 1983). Participants learned that they would be given a report comparing the economic inequality of their city to that of peer cities. After participants entered their zip code, city, and state of residence, a throbber (i.e., rotating image that represents information processing) appeared on their screens for three seconds, then was replaced with a fictitious economic inequality report (Web Appendix D). Those in the high (low) inequality condition were told that inequality in their city was higher (lower) than in peer cities.

Following this task, participants rated income distribution in their city (“How does the income distribution in your city compare to peer cities?”) on a 7-point scale (1 = “income in my city is more equal,” 7 = “income in my city is more unequal”). Next, they rated system trust with the single-item measure from the Study 1 pretest. They then moved on to an ostensible second survey, which instructed them to rate a brand. Participants rated their purchase intentions (“How likely is it that you will purchase from Walmart in the near future?”) using a 7-point scale (1 = “very unlikely,” 7 = “very likely”), willingness to pay (WTP; “How much will you spend at
Walmart over the next month?”) on a sliding scale ($0 to $500), and brand trust (“This brand is very trustworthy,” “This brand is very reliable,” “I trust this brand”; $\alpha = .95$) on a 7-point Likert scale (1 = “strongly disagree,” 7 = “strongly agree”). Participants next completed the 33-item Crowne and Marlowe (1960) social desirability scale, which requires true or false responses to statements that reflect socially desirable attributes (e.g., “Before voting I thoroughly investigate the qualifications of all the candidates”). Consistent with the scoring methods, we summed socially desirable responses (1 = desirable, 0 = undesirable) to reflect each participant’s general tendency to provide socially desirable responses. As a manipulation check, we asked participants to complete a three-item economic inequality measure (“Economic inequality in my city is very high,” “Economic inequality in my city is higher than in peer cities,” “Income is distributed very unequally in my city”; $\alpha = .90$) on a 7-point scale (1 = “strongly disagree,” 7 = “strongly agree”). To ensure that inequality did not affect perceptions of Walmart’s leadership, we also asked participants to complete a three-item (\(\alpha = .80\)) brand leader measure (“This brand is a leader in its industry,” “This is a dominant brand,” “This brand has more control in its industry than competing brands”) on a 7-item scale (1 = “strongly disagree,” 7 = “strongly agree”). Finally, participants rated their involvement (1 = “not very involved,” 7 = “very involved”), provided their demographic information, and were debriefed.

Results and discussion

Manipulation checks and other measures. Confirming the efficacy of the inequality manipulation, an analysis of variance (ANOVA) of inequality ratings revealed a significant main effect of inequality ($M_{\text{high}} = 5.40$, SD = 1.22; $M_{\text{low}} = 2.99$, SD = 1.43; $F(1,123) = 102.71$, $p = .000$). There were no significant effects on social desirability ($F(1,123) = .77$, $p = .38$), brand leadership ($F(1,123) = 1.10$, $p = .30$), or involvement ($F(1,123) = .73$, $p = .39$).
Brand performance. In Study 2 we measured performance according to the participants’ purchase intentions and WTP. In support of H1, the ANOVA of purchase intentions revealed a significant negative effect of inequality ($M_{\text{high}} = 4.68$, SD = 2.15; $M_{\text{low}} = 5.60$, SD = 1.78; $F(1,124) = 6.83$, $p = .01$). Similar results emerged for WTP (see Web Appendix C). Including social desirability as a covariate or moderator (i.e., inequality × social desirability) did not significantly influence the effect of inequality on purchase intentions or WTP, so tendencies to provide socially desirable responses do not appear to influence the effect of economic inequality on performance.

Macro-to-micro mediation by trust. An ANOVA of system trust ratings revealed a significant negative effect of inequality on system trust ($M_{\text{high}} = 3.78$, SD = 1.03; $M_{\text{low}} = 4.25$, SD = 1.21; $F(1,125) = 6.12$, $p = .01$). Similarly, an ANOVA of brand trust ratings revealed a significant negative effect of inequality on brand trust ($M_{\text{high}} = 3.83$, SD = 1.56; $M_{\text{low}} = 4.42$, SD = 1.51; $F(1,124) = 4.68$, $p = .03$).

To test H2b, which specifies a predicted pathway (economic inequality → system trust → brand trust → brand performance) through which inequality influences brand leader performance, we performed the bootstrapped serial mediation procedures described by Hayes (2012; Preacher, Rucker, and Hayes 2007), using the PROCESS macro (Model 6; 10,000 bootstrapped samples). We dummy coded economic inequality as high (1) or low (0), then entered system trust and brand trust as mediators of the effect of inequality on purchase intentions and WTP. The full serial mediation model through system and brand trust was significant for purchase intentions (indirect effect = -.17, SE = .10; 95% confidence interval [CI]:

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1 The correlation between system and brand trust was significant but weak ($r = .31$, $p = .000$), suggesting that customers discriminate the different levels of trust.
-.43, -.03) and WTP (indirect effect = -4.95, SE = 3.30; 95% CI: -14.54, -.82), in support of H2b. These results remained significant even with social desirability included as a covariate. An alternate, “reversed” specification of trust (economic inequality → brand trust → system trust → brand leader performance) was nonsignificant for purchase intentions (indirect effect = .01, SE = .02; 95% CI: -.01, .08) and WTP (indirect effect = .51, SE = 1.19; 95% CI: -.87, 4.80), so the mediation is macro-to-micro and not micro-to-macro.

Overall, Study 2 replicated our primary finding that inequality reduces the performance of leader brands and illuminated the macro-to-micro trust process underlying this effect, in support of H2b. The negative effect of inequality on brand performance arises due to the effects of system trust on brand trust. Furthermore, we ruled out status, a related but different construct from leadership, which is an important clarification for managing high status, niche brands. Finally, because degrading brands may seem socially desirable in poor economic conditions, we also ruled out social desirability as a potential explanation for our findings, in further support for the notion that trust underlies the connection between economic inequality and brand leader performance. In Study 3, we examine in turn how brand leaders may restore trust and performance in conditions of high economic inequality.

**Study 3: Mitigating the Effects of High Economic Inequality**

The unidirectional path (economic inequality → lower system trust → lower brand trust → lower brand performance) identified through Studies 1 and 2 suggests brand leaders may be

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2 We also tested a simple mediation model that included only brand trust (i.e., economic inequality → brand trust → brand performance) to test whether the Study 1 findings were replicated in Study 2. These results revealed a significant simple mediation for purchase intentions (indirect effect = -.51, SE = .25; 95% CI: -1.04, -.05) and WTP (indirect effect = -15.19, SE = 8.17; 95% CI: -35.49, -2.55), indicating that Study 2 replicated the Study 1 results.
victims of circumstance—holding a leadership position appears to expose brands to the pernicious effects of inequality. Managers therefore face a critical question about whether trust and performance can be restored in conditions of high inequality. A variety of strategies are available to brands, but according to our theorizing, strategies that signal higher levels of economic goodwill, as a form of direct trust restoration, should be the most effective for restoring the brand trust and performance eroded by high inequality. Therefore, in Study 3 we manipulated economic inequality as in Study 2, and we measured brand trust, purchase intentions, and WTP for a leader brand (Starbucks) in conditions where the leader had implemented (1) no initiative (control), (2) an economic goodwill initiative in the form of a program that donates money to help people earning low incomes, or (3) a non-economic goodwill initiative in the form of a program that donates money to reduce carbon emissions. Comparing the different types of goodwill initiatives helps rule out the warm glow explanation for our proposed effects (Habel et al. 2016).

Method

Brand leader pretest. We pretested our prediction that customers see Starbucks as a brand with high leadership. In exchange for compensation ($0.25), 48 U.S. adults (19 women; median age = 29.50 years) from AMT ranked ten large U.S. coffee retail brands (Starbucks, Gloria Jean’s Coffees, Caribou Coffee, Coffee Beanery, Dunkin’ Donuts, Tully’s Coffee, Peet’s Tea and Coffee, Lavazza Coffee, Bewley’s, Tim Hortons; presented in random order) on leadership (1 = highest, 10 = lowest), as in Study 2. A series of Wilcoxon signed-rank tests revealed that Starbucks ($M_{\text{rank}} = 1.44$) ranked higher than all other coffee retailers ($|Z|s > 3.95, ps < .001$).

Goodwill pretest. We pretested the fictitious initiatives that we used in this study to signal economic and non-economic goodwill. In exchange for compensation ($0.25), 91 U.S. adults (41
women; median age = 32.50 years) from AMT were recruited, ostensibly to complete a survey about Starbucks. Participants were assigned to one of three conditions (economic goodwill, non-economic goodwill, or no goodwill [control]). Those in the economic goodwill condition read about a new program aimed at helping those with low incomes:

*Starbucks Gives* is a new part of the Starbucks community development program that provides resources to local communities. Below are the details of the program:

- A portion of every dollar spent on any purchase is donated
- Donations are given directly to local community development programs
- Emphasis is on helping local individuals with low incomes do better

Those in the non-economic goodwill condition read about a program aimed at reducing greenhouse gas emissions. Thus, we applied a common CSR activity (green program) to elicit a sense of goodwill that is not specific to the economy:

*Starbucks Cuts* is a new part of the Starbucks environmental program that reduces waste and lowers carbon emissions. Below are the details of the program:

- A portion of every dollar spent on any purchase is donated
- Donations are given directly to local programs that provide clean energy services
- Emphasis is on helping local companies reduce CO₂ emissions

Finally, those in the control, no goodwill condition did not read about any new Starbucks program. All participants rated overall goodwill (“Starbucks helps society”) and economic goodwill (“Starbucks helps people who are economically disadvantaged”) using 7-point scales (1 = “strongly disagree,” 7 = “strongly agree”). A one-way ANOVA of overall goodwill ratings revealed a significant effect of the condition ($F(2, 88) = 12.93, p = .000$): The economic (vs. no) goodwill condition increased overall goodwill ratings ($M_{EG} = 5.70, SD = .92; M_{no\ signal} = 4.16, SD = 1.42; t(88) = 4.89, p = .000$), as did the non-economic (vs. no) goodwill initiative condition ($M_{NEG} = 5.30, SD = 1.29; M_{no\ signal} = 4.16, SD = 1.42; t(88) = 3.62, p = .000$). However, goodwill ratings did not differ between economic and non-economic conditions ($t(88) = 1.26, p = .21$). Instead, the economic (vs. no) goodwill condition increased economic goodwill ratings ($M_{EG} = \ldots$)
5.50, SD = .97; \( M_{\text{no signal}} = 3.45, \text{SD} = 1.39; t(88) = 6.37, p = .000 \), whereas the non-economic (vs. no) goodwill condition had no effect on economic goodwill ratings \( t(88) = .98, p = .37 \). Moreover, the economic (vs. non-economic) goodwill condition significantly increased economic goodwill ratings \( M_{\text{EG}} = 5.50, \text{SD} = .97; M_{\text{NEG}} = 3.77, \text{SD} = 1.36; t(88) = 5.35, p = .000 \). These results confirmed that our fictitious programs successfully signaled different levels and types of goodwill. With our stimuli pretested and assumptions confirmed, we proceeded to the main study.

**Participants.** Three-hundred thirty-seven U.S. adults (184 women; median age = 32 years) from AMT completed this study in exchange for compensation ($0.35). The sample size was determined prior to data collection, with the goal of achieving 50–60 participants per cell. Data were screened for partial responses. Eight participants submitted responses with more than one item left blank, but excluding them had no material effect on the significance of results, so we retained the partial responses.

**Procedure.** Participants were randomly assigned to one of six conditions in a 2 (inequality: high vs. low) × 3 (goodwill: economic vs. non-economic vs. none) design. Under the guise that they were separate studies, participants first completed the inequality manipulation task from Study 2. Then they rated income distribution in their city, again as in Study 2. Moving on to the next portion of the study, participants were informed that they would be rating a brand and were assigned to one of the three goodwill conditions from the pretest. They rated their purchase intentions (“How likely is it that you will purchase from Starbucks in the near future?”) using a 7-point scale \((1 = \text{“very unlikely,” } 7 = \text{“very likely”})\), WTP (“How much will you spend at Starbucks over the next month?”) using a sliding scale ($0 to $100), and the same three-item \((\alpha = .96)\) brand trust measure from Study 2. They also completed the same three-item \((\alpha = .92)\)
inequality measure that we used in Study 2. To ensure the programs were believable, participants rated credibility (“How believable is the information you read about Starbucks?”) using a 7-point scale (1 = “not very believable,” 7 = “very believable”). Finally, participants provided their age, gender, and income and were debriefed.

Results

Manipulation checks and other measures. A $2 \times 3$ ANOVA of inequality ratings yielded only a significant effect of the inequality condition ($M_{\text{high}} = 5.34$, $SD = 1.34$; $M_{\text{low}} = 31.3$, $SD = 1.54$; $F(1,326) = 192.16$, $p = .000$), whereas the $2 \times 3$ ANOVA of credibility ratings also yielded a significant effect of the inequality condition ($M_{\text{high}} = 4.80$, $SD = 1.41$; $M_{\text{low}} = 5.19$, $SD = 1.17$; $F(1,324) = 8.31$, $p = .004$), which was unexpected but consistent with our theory. If inequality reduces trust in brand leaders, it follows that inequality may reduce the credibility of information associated with brand leaders. However, there was not a significant inequality $\times$ goodwill condition ($F(1,324) = 1.12$, $p = .33$), so inequality did not appear to alter the credibility of specific initiatives.

Brand performance. A $2 \times 3$ ANOVA of purchase intentions yielded a significant interaction ($F(1,330) = 7.89$, $p = .000$). To decompose it, we examined the simple effects of economic inequality in the control (i.e., no goodwill signal) condition, which replicated the significant negative effect of economic inequality on purchase intentions (Web Appendix C), in additional support of $H_1$. Can initiatives undo this effect? To examine restorative effects, we conducted comparisons of the effects of goodwill conditions on purchase intentions in the high inequality condition. We found a significant positive effect of the economic (vs. no) goodwill condition on purchase intentions ($M_{\text{no signal}} = 3.50$, $SD = 2.23$, $M_{\text{EG}} = 4.68$, $SD = 1.86$; $t(330) = 2.96$, $p = .003$) but only a trending effect of the non-economic (vs. no) goodwill condition on
purchase intentions ($M_{\text{no signal}} = 3.50$, SD = 2.23, $M_{\text{NEG}} = 4.16$, SD = 2.13; $t(330) = 1.66$, $p = .10$).

We repeated these analyses for WTP and brand trust, which yielded similar result patterns and further replicated Studies 1 and 2: WTP and brand trust were restored by economic goodwill but not by non-economic goodwill. Web Appendix C and Figure 3 display the results for purchase intentions, WTP, and brand trust.

**Moderated mediation by brand trust.** Economic goodwill can more effectively undo the negative effect of inequality on brand leader performance than non-economic goodwill or no goodwill. To examine whether changes in trust underpin this recovery effect, as well as to test whether trust mediates the negative effect of inequality in the no goodwill conditions (replicating Studies 1 and 2), we conducted a moderated mediation analysis using only the control and economic goodwill conditions (2012; Preacher, Rucker, and Hayes 2007; PROCESS Model 8; 10,000 bootstrapped samples). Economic inequality was dummy coded as 1 = high or 0 = low, and goodwill condition was coded as 1 = economic goodwill or 0 = no goodwill.

We examined the mediating process from Studies 1 and 2, such that we entered brand trust as the mediator of the effect of inequality on purchase intentions and WTP, with the goodwill condition as the moderator of these effects. Trust significantly mediated the negative effect of inequality on purchase intentions in the no goodwill condition (indirect effect = -.52, SE=.19; 95% CI: -.92, -.17) but not in the economic goodwill condition (indirect effect = .32, SE=.17; 95% CI: -.01, .69), such that when brand leaders signaled economic (vs. no) goodwill, the negative effects of inequality were nullified. We examined the same mediating effects for WTP and confirmed that trust significantly mediated the negative effect of inequality on WTP in the no goodwill condition (indirect effect = -2.56, SE = .95; 95% CI: -4.69, -.91) but not in the
economic goodwill condition (indirect effect = 1.58, SE = .91; 95% CI: -0.02, 3.60).

The results of these analyses indicate that economic goodwill can serve to nullify the negative effect of inequality on brand trust and performance. A different way to examine these data would be to test whether economic goodwill increased brand performance by restoring brand trust when economic inequality was high (vs. low). Therefore, we entered brand trust as the mediator of the effect of the economic (vs. no) goodwill condition on purchase intentions and WTP, with the inequality condition as a moderator. Brand trust significantly mediated the positive effect of economic goodwill on purchase intentions in the high inequality condition (indirect effect = .42, SE = .20; 95% CI: .03, .82). We observed an opposite mediating pattern in the low inequality condition (indirect effect = -.42, SE = .16; 95% CI: -.77, -.13). Similarly, brand trust significantly mediated the positive effect of economic goodwill on WTP in the high inequality condition (indirect effect = 2.07, SE = 1.00; 95% CI: .19, 4.19); the opposite pattern occurred in the low inequality condition (indirect effect = -2.08, SE = .86; 95% CI: -4.03, -.63).

Discussion

Study 3 provided several key insights. First, in line with Studies 1 and 2, it demonstrated a negative effect of high (vs. low) economic inequality on brand leader performance and the mediating role of brand trust. Moreover, in support of H3, economic goodwill restored brand leader trust in conditions of high economic inequality. High (vs. low) inequality reduced trust in Starbucks by 13% (M\text{trust} = 4.88 vs. 5.62), but when Starbucks signaled economic goodwill (M\text{trust} = 5.48), 81% of eroded trust was recovered. Alternatively, non-economic goodwill (i.e., green program) did not significantly recover trust, so the warm glow generated by CSR programs in general may be insufficient for restoring eroded brand trust due to economic inequality.

In addition, Study 3 revealed that signaling economic goodwill is not universally
advantageous. If inequality is low, economic goodwill initiatives adversely affect purchase intentions and WTP through brand trust. Perhaps when economic conditions are favorable, such programs are regarded as persuasion attempts or unnecessary costs that undermine performance (Habel et al. 2016). These mixed effects may shed light on why others (e.g., Mishra and Modi 2016) have not observed significant positive effects of community development on firm value. Investing in a community’s economic well-being may be effective only if local economic conditions warrant such initiatives.

**Study 4: Experimental Replication**

Studies 1–3 consistently demonstrate a negative effect of economic inequality on brand leader performance. We also have verified the causal role of inequality using experimental manipulation in Studies 2 and 3. Yet leadership has not been manipulated experimentally. Thus, the primary goal of Study 4 is to verify the causal role of brand leadership and separate it from other attributes (e.g., channel presence) that may correlate with leadership, by creating a fictitious brand subtly framed as a brand leader (vs. no framing). Because existing brand leadership could undermine our ability to manipulate perceptions of leadership, we chose an industry (sofa manufacturing) for which we assumed actual brand leadership is mostly unknown. We test this assumption using a sample of 50 U.S. adults (27 women; median age = 33 years) from AMT, who received compensation ($0.10) and were asked to indicate from memory the brand they believe is the current leader in U.S. sofa manufacturing or else type “I don’t know.” Responses were as follows: 62% “I don’t know,” 18% LazyBoy, 4% Ashley, 4% Broyhill, 4% IKEA, and 8% other (i.e., brands mentioned only once). Thus, it appears perceptions of brand
leadership in sofa manufacturing are malleable. In Study 4, we also included measures of economic optimism and general mood, to rule them out as alternative explanations.

**Method**

*Brand leader pretest.* We pretested the brand leadership manipulation using 60 participants (29 women; median age = 33 years) from AMT who were paid $.20. Participants were assigned to one of two (high vs. low) brand leader conditions (see Web Appendix E). All participants read about a fictitious sofa product and corresponding brand (“RMK”). The brand in the low (high) leadership condition was framed as follows: “RMK, (leader in) sofa manufacturing and home furnishings, based in the U.S.” After reading the product and brand descriptions, participants used 7-point scales to rate brand leadership (“This brand is a leader in the home furnishing industry,” “This is a dominant brand,” “This brand has more control in its industry than competing brands”; α = .88; 1 = “strongly disagree,” 7 = “strongly agree”); product satisfaction (“How satisfied would you be with the sofa you evaluated?”; 1 = “very dissatisfied,” 7 = “very satisfied”); and information credibility (“How believable was the information contained in the brand description?”; 1 = “not very believable,” 7 = “very believable”). Confirming the efficacy of our manipulation, an ANOVA revealed a significant effect of leadership condition on leadership ratings ($M_{high} = 4.90$, $SD = 1.07$; $M_{low} = 4.04$, $SD = 1.14$; $F(1,58) = 8.99$, $p = .004$) but no significant effects on product satisfaction ($F(1,57) = .002$, $p = .97$) or information credibility ratings ($F(1,58) = .08$, $p = .78$). That is, we manipulated brand leadership without affecting product satisfaction and credibility. With the efficacy of the manipulation confirmed, we proceeded to the main study.

*Participants.* Two-hundred sixty U.S. adults (125 women) from AMT completed this study in exchange for compensation ($.35). The median age was 32 years. The sample size was
determined prior to data collection, with the goal of achieving 50–60 participants per cell. Data were screened for partial responses and the amount of time spent reading brand descriptions. Five study participants submitted responses with more than one item left blank. Excluding them had no material effect on the results, so we retained the partial responses. Twenty-five participants who spent fewer than 5 seconds reading the 85–87 word brand descriptions (see Web Appendix E) were excluded though, resulting in a final sample size of 235. Dropped cases did not materially affect the significance of results, except as noted.

Procedure. Participants were randomly assigned to one of four conditions in a 2 (inequality: high vs. low) × 2 (leadership: high vs. low) design. Under the guise of separate studies, participants first completed the inequality manipulation task from Study 2. Next, as part of an ostensibly unrelated brand evaluation task, participants had to review the image and description of a sofa, then indicate how likely they would be to purchase it (1 = “very unlikely,” 7 = “very likely”) and how much they would be willing to pay for it using a sliding scale ($0 to $1,000). They then rated brand trust using the same scale as Studies 2 and 3 (α = .95). We included measures of economic optimism and mood to test whether the observed effects were merely artifacts of affective states induced by inequality. Participants rated economic optimism (“How optimistic are you about your future income?”) on a 7-point scale (1 = “not very optimistic,” 7 = “very optimistic”), rated mood (“Overall, my mood is…”) using a 21-point scale (-10 = “very unpleasant,” 10 = “very pleasant”), rated economic inequality using the same scale as in Studies 2 and 3 (α = .92), and rated involvement (1 = “not involved at all,” 7 = “very involved”), before they provided demographic information and were debriefed.

Results

Manipulation checks and other measures. Confirming the efficacy of the inequality
manipulation, a $2 \times 2$ (inequality) ANOVA of inequality ratings revealed only a significant main effect of inequality ($M_{\text{high}} = 5.50$, $SD = 1.15$; $M_{\text{low}} = 2.71$, $SD = 1.35$; $F(1,230) = 284.31, p = .000$). Brand leadership was confirmed in a pretest. We did not observe any significant main or interaction effects on economic optimism ($Fs(1,230) < 2.34, ps > .13$), mood ($Fs(1, 228) < 1.56, ps > .21$), or involvement ($Fs1, 223) < 2.17, ps > .14$).

**Brand performance.** In Study 2 we measured brand performance as purchase intentions and WTP for a brand’s product. A $2 \times 2$ ANOVA of purchase intentions revealed a significant interaction ($F(1,231) = 11.78, p = .001$), which we decomposed by examining the simple effects of inequality in the high and low brand leadership conditions. The high brand leadership condition revealed a significant negative effect of high economic inequality ($M_{\text{high}} = 3.21$, $SD = 1.62$; $M_{\text{low}} = 3.97$, $SD = 1.70$; $F(1,231) = 6.83, p = .01$), in support of $H_1$. Alternatively, comparisons in the low brand leadership condition revealed an unexpected, significant, positive effect of high economic inequality on purchase intentions ($M_{\text{high}} = 4.38$, $SD = 1.38$; $M_{\text{low}} = 3.75$, $SD = 1.46$; $F(1,231) = 4.99, p = .03$), which we consider subsequently in the “Discussion” section. We observed a similar pattern of effects on WTP (see Web Appendix C).

**Mediation by trust.** A $2 \times 2$ ANOVA of brand trust ratings revealed a significant interaction ($F(1,231) = 8.32, p = .004$). Comparisons within the high leadership condition indicated a marginal negative effect of inequality ($M_{\text{high}} = 4.43$, $SD = .98$; $M_{\text{low}} = 4.77$, $SD = .84$; $F(1,231) = 3.69, p = .06$), whereas comparisons in the low leadership condition revealed a significant positive effect of inequality ($M_{\text{high}} = 4.92$, $SD = .92$; $M_{\text{low}} = 4.56$, $SD = .83$; $F(1, 231) = 4.69, p = .03$). High (vs. low) economic inequality decreased brand trust when leadership was high, as expected. Figure 4 illustrates the means by condition.
Following the bootstrapping procedures described by Hayes (2012; Preacher, Rucker, and Hayes 2007), we conducted a moderated mediation analysis (PROCESS, Model 8; 10,000 bootstrapped samples) to test the underlying process by which economic inequality influences brand performance. Consistent with our moderated mediation prediction, brand trust mediated the negative effect of inequality (1 = high, 0 = low) on purchase intentions in the high brand leadership condition (effect = -.25, SE = .14; 95% CI: -.53, -.001), in further support of H2a. It also mediated the positive effect of inequality on purchase intentions in the low brand leadership condition (effect = .27, SE = .14; 95% CI: .03, .55). Similarly, for WTP, brand trust mediated the negative effect of inequality in the high brand leadership condition (effect = -17.31, SE = 11.18; 95% CI: -46.74, -1.39), in support of H2a, as well as the positive effect of inequality in the low brand leadership condition (effect = 18.06, SE = 10.98; 95% CI: 2.34, 46.80).3

Discussion

In Study 4, we again found that economic inequality eroded trust more among brand leaders than non-leaders. The consistent results, even when using a controlled experiment in which we manipulated economic inequality and brand leadership, offer convergent validity regarding our Study 1 findings and further evidence in support of H1 and H2a. Crucially, we were able to verify the causal role of brand position (i.e., leadership) relative to other correlated attributes (e.g., familiarity, market presence). In an unexpected finding, Study 4 revealed an increase in brand trust and performance as economic inequality increased if the brand was not framed as a leader. This surprising effect could imply an underdog effect, such that customers

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3 When we reanalyzed the data with dropped participants, the slightly changed results showed that (1) the 2 × 2 interaction on WTP decreased from significant (p = .03) to marginal (p = .06), (2) the simple effects of inequality on trust in the high (p = .06) and low (p = .03) leadership conditions became marginal (both p = .10), and (3) the mediating effect of trust on WTP became marginal (90% CIs). All other significant effects remained significant (ps < .05).
value brands struggling against the odds in unfair economic conditions (Paharia et al. 2011).

Alternatively, it could be a main street effect; inequality increases support of the local community and brands that seem local or simply enhances preference for brands with weaker links to the prevailing economic system. Whatever the process, this unexpected finding provides a fertile ground for further research.

The negative effects of inequality on brand leader trust and performance emerged using a fictitious brand, so Study 4 affirms that leadership, not other confounding associations, underpin our findings. We also can rule out economic optimism and general mood as alternative explanations. Study 4 thus reinforces the causal relationship between economic inequality and brand performance for leaders, though it raises questions about the impact on brands that do not hold a dominant position in the market.

**General Discussion**

These four studies tell a simple story: When economic inequality is high, brand leaders’ performance suffers, and trust bridges this relationship. Because inequality reduces trust in the economic system, trust in brands that seem to wield more influence (i.e., brand leaders) becomes eroded. We demonstrate the empirical ramifications of this process in four studies. Using real-world data, in Study 1 we find that inequality relates more negatively to brand performance (i.e., purchase behaviors and purchase intentions) as leadership increases ($H_1$); an erosion of brand trust mediates this relationship ($H_{2a}$). In Study 1 we also find that leader advantage declines by as much as 28% when economic inequality increases. In Study 2, we verify the macro-to-micro link between system and brand trust that explicates the effect of inequality on brand leader
performance (H2b). Study 3 provides evidence that confirms our proposed theoretical process. Because trust erosion arises due to mere misgivings about leader brands, a signal of economic goodwill can restore brand trust and performance (H3). Finally, in Study 4, an experiment verifies the causal role of leadership. Table 3 summarizes support for hypotheses by study. These findings offer several important insights to marketing theory and practice.

**Contributions to marketing theory**

Underlying our theoretical arguments is a shift in attention, away from exchange-level factors (e.g., customer experience, product attributes) typically studied in extant research and toward the macroeconomic environment that surrounds all customer–brand interactions. Our findings provide theoretical insights into how structural shifts in the economy can affect brand trust and performance, with consequences for customer–brand relationships and brand value.

The findings also provide new insights into system trust theory. Developed from institutional theory, system trust theory explains the nature of the relationship between system- and actor-level trust. Because system trust legitimizes brand trust, changes in system trust carry over and alter levels of trust in individual brands (Grayson, Johnson, and Chen 2008; Hansen 2012; Pennington, Wilcox, and Grover 2003). We introduce a key moderator of this carryover effect: brand leadership. Unfavorable system-level changes (e.g., increased economic inequality) that erode system trust disproportionately affect brands with high leadership levels. Moreover, the unexpected findings from Study 4—namely, that higher inequality boosts non-leader brand trust and performance—suggest that the relationship between system and brand trust is more complex than previously known.

We also advance the discourse on brand leadership. Typically, brand managers strive to
increase market leadership; when they achieve leadership, they advertise this position. Brand leadership is a key component of brand equity (Aaker 2014; Stahl et al. 2012). This generally favorable view of brand leadership rests on the supposition that leadership confers benefits beyond market share (Boulding and Staelin 1990; Podolny 1993). However, our findings also highlight a vulnerability associated with leadership. Study 1 shows that the decline in brand trust associated with increasing levels of inequality is five times greater for brands perceived as high (vs. average) in their leadership. Leaders’ advantage eroded in Study 1, but it did not completely vanish, as in Study 4. In Study 4, we experimentally isolated leadership from corollaries such as channel presence, and we found that in conditions of high inequality, leadership (vs. non-leadership) significantly reduced purchase intentions by 27% ($M = 3.21$ vs. $4.38$; $F(1,231 = 16.34, p = .000$). In other words, mentioning (vs. not mentioning) leadership resulted in worse brand performance. Thus, our research identifies conditions in which leadership interferes with brand performance and likely undercuts brand value.

**Contributions to marketing practice**

Our findings provide three crucial insights for brand managers. First, we offer a framework for understanding how inequality affects brand performance. Recent political movements reflect a growing distrust of the economic system; at the same time, customers are suspicious of major brands, such that 65% of U.S. consumers “agree that most have ‘dodged taxes, damaged the environment or bought special favors from politicians’” (Montgomerie 2015, p. 1). Indeed, the Marketing Science Institute (2016) lists understanding distrust of big brands among its 2016-2018 research priorities. We posit that the economic climate has created conditions that reduce trust in leading brands.

Second, we explain how brand managers can undo these negative effects of inequality. A
typical response to high inequality might be to lower prices, to meet growing demand for them. Yet in conditions of high inequality, strategic initiatives that signal economic goodwill (e.g., programs aimed at improving local economic welfare) can restore brand leader trust and performance better than other possible initiatives. This tool is potent; customers “strongly believe—80% agree—that a company can ‘both increase profits and increase the economic and social conditions in the community where it operates’” (Colvin 2016, p. 1). Such strategies therefore may be doubly beneficial, such that they restore trust with only a minimal impact on profit margins or brand quality perceptions. Notably, programs that signal economic goodwill specifically address the misgivings created by high inequality, whereas programs that signal non-economic goodwill (e.g., environmental) do not.

Third, our findings highlight the importance of managing inequality at a local level. The findings from Study 1 indicate that “local” (i.e., city-level) economic environments dictate how inequality affects customers, so they reveal the level at which we must gather market intelligence. Furthermore, trust recovery strategies need to reflect both market position and market conditions. Our findings indicate that strategic programs that signal economic goodwill in conditions of high inequality are beneficial, but the same programs, when implemented in conditions of low inequality, reduce trust and performance. This outcome may stem from beliefs that such programs represent an undue cost (Habel et al. 2016), are persuasion attempts, or are otherwise inauthentic. But for brands that lack market dominance (i.e., unknown brands), our findings suggest that inequality actually may boost their performance (Study 4). Smaller brands may benefit from publicizing their humble beginnings, small size, ability to “beat the odds,” or community ties, though additional research is needed to confirm these effects and their underlying mechanisms. Table 4 summarizes some recommendations for brand managers.
Limitations and further research

We used a multimethod approach to triangulate the impact of economic inequality on brand performance, yet several limitations and avenues for research remain. For example, researchers could examine individual differences to understand which customer motivations or mindsets amplify the effects of economic inequality on brand performance. Other studies might explore how economic inequality affects brand leader performance in other countries, since, for example, cultures vary in their acceptance of inequality (Oyserman 2006). Yet another option might be to explore additional strategies for overcoming the negative effects of inequality and whether the effects observed in this research generalize to other types (e.g., social) of inequality. Finally, further research should consider how inequality shapes preferences for non-leaders or newly launched brands that might seem detached from the prevailing economic system. The paucity of marketing scholarship on economic inequality, combined with the significance of its effects, thus provides many opportunities for research.
References


of Personality and Social Psychology, 51 (1), 110-16.
### TABLE 1
**Study 1: Partial Correlation Results from Pretest**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Economic inequality</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. System trust (single item)</td>
<td>-.26**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. System trust (multi-item)</td>
<td>-.34***</td>
<td>.71***</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td>4. Dispositional trust</td>
<td>-.09</td>
<td>.26**</td>
<td>.45**</td>
<td>.71</td>
</tr>
</tbody>
</table>

Notes: Values that are off the diagonal indicate Pearson partial correlation coefficients. Values on the diagonal indicate Cronbach’s alpha values. Annual household income (M = $44,114) is included as a covariate. The results are robust to the inclusion of dispositional trust and/or the removal of income as covariates. **p ≤ .01. ***p ≤ .001.
### TABLE 2
Study 1 Estimation Results: Inequality Eroding Leading Brands' Trust and Performance Advantage

<table>
<thead>
<tr>
<th>Primary Predictors</th>
<th>Model 1: Purchase Behaviors</th>
<th></th>
<th>Model 2: Purchase Intentions</th>
<th></th>
<th>Model 3: Brand Trust</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>Std Err</td>
<td>Estimate</td>
<td>Std Err</td>
<td>Estimate</td>
<td>Std Err</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------</td>
<td>---------</td>
<td>-------------------</td>
<td>---------</td>
<td>----------------------</td>
<td>---------</td>
</tr>
<tr>
<td>City-level economic inequality</td>
<td>-.547</td>
<td>(.395)</td>
<td>-.280 ***</td>
<td>(.106)</td>
<td>-.676 **</td>
<td>(.266)</td>
</tr>
<tr>
<td>Brand leadership</td>
<td>.275 *** (.007)</td>
<td></td>
<td>.127 *** (.001)</td>
<td></td>
<td>.414 *** (.003)</td>
<td></td>
</tr>
<tr>
<td>Inequality × leadership</td>
<td>-.341 *** (.127)</td>
<td></td>
<td>-.060 ** (.023)</td>
<td></td>
<td>-.222 *** (.049)</td>
<td></td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand quality</td>
<td>.142 *** (.005)</td>
<td></td>
<td>.181 *** (.001)</td>
<td></td>
<td>.610 *** (.002)</td>
<td></td>
</tr>
<tr>
<td>Brand familiarity</td>
<td>.614 *** (.011)</td>
<td></td>
<td>.183 *** (.002)</td>
<td></td>
<td>.661 *** (.005)</td>
<td></td>
</tr>
<tr>
<td>Respondent age</td>
<td>-.005 *** (.001)</td>
<td></td>
<td>-.002 *** (.001)</td>
<td></td>
<td>.006 *** (.001)</td>
<td></td>
</tr>
<tr>
<td>Respondent gender</td>
<td>-.136 *** (.017)</td>
<td></td>
<td>.002 *** (.008)</td>
<td></td>
<td>.100 *** (.018)</td>
<td></td>
</tr>
<tr>
<td>Respondent income</td>
<td>.028 *** (.004)</td>
<td></td>
<td>.008 *** (.002)</td>
<td></td>
<td>-.005 (.004)</td>
<td></td>
</tr>
<tr>
<td>City population</td>
<td>-.007 (.020)</td>
<td></td>
<td>-.003 (.003)</td>
<td></td>
<td>.010 (.010)</td>
<td></td>
</tr>
<tr>
<td>City-level median household income</td>
<td>.014 (.055)</td>
<td></td>
<td>-.021 (.015)</td>
<td></td>
<td>-.079 ** (.037)</td>
<td></td>
</tr>
<tr>
<td>Global intercept</td>
<td>-3.986 *** (.639)</td>
<td></td>
<td>1.419 *** (.157)</td>
<td></td>
<td>2.769 *** (.157)</td>
<td></td>
</tr>
</tbody>
</table>

**Model Fit**
- Deviance (-2 log likelihood): 95263.30, 284673.90, 525902.30
- AIC: 95287.30, 284699.90, 525930.30
- BIC: 95337.10, 284753.70, 525988.30

* * < .10, ** p < .05, *** p < .01. Notes: The sample included 159,597 observations for brand trust and purchase intentions and 86,155 observations for purchase behaviors.
### TABLE 3
Summary Evidence for Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H₁</strong>: Brand leadership × inequality → performance</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td><strong>H₂a</strong>: Inequality → (-) brand leader trust → (-) performance</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td><strong>H₂b</strong>: Inequality → (-) system trust → (-) brand leader trust</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>H₃</strong>: Inequality × economic goodwill → performance</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 4
Summary Guidance for Brand Managers

<table>
<thead>
<tr>
<th>Local Economic Conditions</th>
<th>Brand Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-leader</td>
</tr>
<tr>
<td>High Inequality</td>
<td>● Promote small size and &quot;underdog&quot; story</td>
</tr>
<tr>
<td></td>
<td>● Continue typical best practices for growth</td>
</tr>
<tr>
<td>Low Inequality (high equality)</td>
<td>● Continue typical best practices for growth</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FIGURE 1
Conceptual Model

Economic inequality → System trust → Brand trust → Brand Performance

- Economic goodwill

Macro-to-micro trust erosion $H_2$

Brand leadership $H_1$

Willingness to pay

Purchase behaviors

Purchase intentions

$H_3$
FIGURE 2
Study 1: Estimated Effects of Economic Inequality × Brand Leadership on Performance

Notes: This figure is based on a multilevel logistic model that predicts the likelihood of purchase behavior (bought or used brand in past three months), estimated by quasi-likelihood estimation technique with a Laplace approximation (Bates 2010). High and low leadership computed as 1.5 SD. Low leadership brands may be underrepresented in this sample, which includes brands that achieve generally high familiarity across the United States.
FIGURE 3
Study 3: Economic Inequality × Brand Leadership on Brand Trust and Performance

Note: Bars represent standard error.
FIGURE 4
Study 4: Economic Inequality $\times$ Brand Leadership on Brand Trust and Performance

Notes: Bars represent standard error values.
WEB APPENDIX A

Study 1 Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Min</th>
<th>25%</th>
<th>Mdn</th>
<th>75%</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand trust</td>
<td>159,597</td>
<td>6.88</td>
<td>2.30</td>
<td>0</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Purchase intentions</td>
<td>159,597</td>
<td>3.03</td>
<td>.83</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Purchase behaviors</td>
<td>159,597</td>
<td>.18</td>
<td>.38</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Brand leadership (mean centered)</td>
<td>159,597</td>
<td>.00</td>
<td>1.51</td>
<td>-3.81</td>
<td>-1.91</td>
<td>1.19</td>
<td>2.19</td>
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<td>Brand quality</td>
<td>159,597</td>
<td>6.98</td>
<td>2.12</td>
<td>0</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Brand familiarity</td>
<td>159,597</td>
<td>3.73</td>
<td>.78</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Respondent age</td>
<td>8,970</td>
<td>53.03</td>
<td>15.42</td>
<td>18</td>
<td>42</td>
<td>56</td>
<td>65</td>
<td>95</td>
</tr>
<tr>
<td>Respondent gender (female)</td>
<td>8,970</td>
<td>.56</td>
<td>.50</td>
<td>0</td>
<td>0</td>
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<td>1</td>
<td>1</td>
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<tr>
<td>Respondent income (intervals)</td>
<td>8,970</td>
<td>4.82</td>
<td>2.25</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>11</td>
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<tr>
<td>City's population (log)</td>
<td>466</td>
<td>11.85</td>
<td>.73</td>
<td>11.06</td>
<td>11.32</td>
<td>11.63</td>
<td>12.19</td>
<td>15.94</td>
</tr>
<tr>
<td>City's median household income (log)</td>
<td>466</td>
<td>10.86</td>
<td>.32</td>
<td>10.05</td>
<td>10.64</td>
<td>10.81</td>
<td>11.06</td>
<td>11.92</td>
</tr>
<tr>
<td>City's economic inequality (mean centered)</td>
<td>466</td>
<td>.00</td>
<td>0.05</td>
<td>-.13</td>
<td>-.03</td>
<td>.00</td>
<td>.03</td>
<td>.13</td>
</tr>
</tbody>
</table>

Sample Structure

| Brands per respondent                    | 8,970  | 17.79 | 7.75  | 1   | 12  | 17   | 23  | 40  |
| Respondents per city                     | 466    | 19.25 | 35.38 | 1   | 5   | 11   | 21  | 559 |

Note.—N is Number of unique observations in sample, M is mean, SD is standard deviation, Min is minimum, Mdn is median, and Max is maximum. Statistics are presented for unique observations to reduce influence of cities with many respondents and respondents with many brand evaluations.
WEB APPENDIX B

Study 1 Correlations

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<th>Variables</th>
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<th>4.</th>
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<th>6.</th>
<th>7.</th>
<th>8.</th>
<th>9.</th>
<th>10.</th>
<th>11.</th>
<th>12.</th>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2. Purchase intentions</td>
<td>.63</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. Purchase behaviors</td>
<td>.18</td>
<td>.28</td>
<td>1</td>
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<td></td>
<td></td>
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<tr>
<td>4. Brand leadership (mean centered)</td>
<td>.63</td>
<td>.51</td>
<td>.18</td>
<td>1</td>
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<td></td>
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<tr>
<td>5. Brand quality</td>
<td>.76</td>
<td>.60</td>
<td>.19</td>
<td>.59</td>
<td>1</td>
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<tr>
<td>6. Brand familiarity</td>
<td>.31</td>
<td>.35</td>
<td>.22</td>
<td>.29</td>
<td>.37</td>
<td>1</td>
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<td>7. Respondent age</td>
<td>.06</td>
<td>.02</td>
<td>.03</td>
<td>.05</td>
<td>.03</td>
<td>.05</td>
<td>1</td>
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<td>8. Respondent gender (female)</td>
<td>.06</td>
<td>.04</td>
<td>.02</td>
<td>.04</td>
<td>.05</td>
<td>.03</td>
<td>.17</td>
<td>1</td>
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<td>9. Respondent income (intervals)</td>
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<td>.01</td>
<td>-.03</td>
<td>-.01</td>
<td>.01</td>
<td>.06</td>
<td>-.14</td>
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<td>10. City's population (log)</td>
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<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.01</td>
<td>.03</td>
<td>.06</td>
<td>.01</td>
<td>.02</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. City's median household income (log)</td>
<td>-.03</td>
<td>-.02</td>
<td>.00</td>
<td>-.02</td>
<td>-.02</td>
<td>-.01</td>
<td>.00</td>
<td>-.03</td>
<td>.17</td>
<td>-.14</td>
<td>1</td>
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<tr>
<td>12. City's economic inequality (mean centered)</td>
<td>-.01</td>
<td>-.01</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.02</td>
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<td>.01</td>
<td>.01</td>
<td>.30</td>
<td>-.42</td>
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</table>

Note:—Cross-level correlations (e.g. brand evaluation to respondent characteristic) are at the disaggregated level (e.g. brand evaluation with N of 159,957) and within level correlations are for unique occurrences (e.g., 466 cities).
## Study 2 - 4: Summary of Key Experimental Results

<table>
<thead>
<tr>
<th>Study</th>
<th>Mean Comparison</th>
<th>Low Inequality</th>
<th>High Inequality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Study 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase intentions</td>
<td>$F(1, 124) = 6.83, p = .01$</td>
<td>5.60</td>
<td>1.78</td>
</tr>
<tr>
<td>Willingness-to-pay</td>
<td>$F(1, 124) = 3.05, p = .08$</td>
<td>116.54</td>
<td>129.49</td>
</tr>
<tr>
<td>System trust</td>
<td>$F(1, 125) = 6.12, p = .01$</td>
<td>4.25</td>
<td>1.12</td>
</tr>
<tr>
<td>Brand trust</td>
<td>$F(1, 124) = 4.68, p = .03$</td>
<td>4.42</td>
<td>1.51</td>
</tr>
<tr>
<td>Study 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control (no goodwill signal)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase intentions</td>
<td>$F(1, 330) = 10.59, p = .00$</td>
<td>4.77</td>
<td>2.05</td>
</tr>
<tr>
<td>Willingness-to-pay</td>
<td>$F(1, 331) = 7.31, p = .01$</td>
<td>13.20</td>
<td>17.45</td>
</tr>
<tr>
<td>Brand trust</td>
<td>$F(1, 326) = 8.58, p = .00$</td>
<td>5.62</td>
<td>1.02</td>
</tr>
<tr>
<td>Economic goodwill</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase intentions</td>
<td>$F(1, 330) = 5.54, p = .02$</td>
<td>3.77</td>
<td>1.99</td>
</tr>
<tr>
<td>Willingness-to-pay</td>
<td>$F(1, 331) = 3.84, p = .05$</td>
<td>8.95</td>
<td>10.62</td>
</tr>
<tr>
<td>Brand trust</td>
<td>$F(1, 326) = 3.33, p = .07$</td>
<td>5.02</td>
<td>1.38</td>
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<tr>
<td>Non-economic goodwill</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Purchase intentions</td>
<td>$F(1, 330) = .31, p = .58$</td>
<td>4.37</td>
<td>2.02</td>
</tr>
<tr>
<td>Willingness-to-pay</td>
<td>$F(1, 331) = .40, p = .53$</td>
<td>11.14</td>
<td>13.74</td>
</tr>
<tr>
<td>Brand trust</td>
<td>$F(1, 326) = .36, p = .55$</td>
<td>5.34</td>
<td>1.16</td>
</tr>
<tr>
<td>Study 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High brand leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase intentions</td>
<td>$F(1, 231) = 6.83, p = .01$</td>
<td>3.97</td>
<td>1.70</td>
</tr>
<tr>
<td>Willingness-to-pay</td>
<td>$F(1, 230) = 2.91, p = .09$</td>
<td>494.92</td>
<td>192.14</td>
</tr>
<tr>
<td>Brand trust</td>
<td>$F(1, 231) = 3.69, p = .06$</td>
<td>4.77</td>
<td>0.84</td>
</tr>
<tr>
<td>Low brand leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase intentions</td>
<td>$F(1, 231) = 4.99, p = .03$</td>
<td>3.75</td>
<td>1.46</td>
</tr>
<tr>
<td>Willingness-to-pay</td>
<td>$F(1, 230) = 1.82, p = .18$</td>
<td>437.08</td>
<td>194.60</td>
</tr>
<tr>
<td>Brand trust</td>
<td>$F(1, 231) = 4.69, p = .03$</td>
<td>4.56</td>
<td>0.93</td>
</tr>
</tbody>
</table>

Notes: Mean comparisons should be interpreted within each row. In Study 3, goodwill conditions were compared against the control condition in the high inequality condition; bolded means represent significant differences ($p < .05$) compared with control conditions.
Economic Inequality Manipulation in Studies 2–4

This report has been prepared for [city], city class size M4. The graph below divides the population into equal fifths and shows the percent of income earned by the top vs. bottom groups in [city] compared to other peer cities. There appears to be more economic inequality in peer cities overall than in [city] (less economic inequality in [city] than in peer cities overall). In other words, income is less (more) equally distributed in [city].

*Data furnished by the Internal Revenue Service 2015*
WEB APPENDIX E

Study 4: Brand Leader Manipulation

**Product description**

The configurable design nods to the relaxed modernism of the mid-20th century, while its comfort is unparalleled. Low frames play clean-lined counterpoint to sink-in, 100% goose feather cushions wrapped in the softest layer of pure down. Together, it's a modern marriage of epic scale, perfect proportions and massive comfort. Sectional components are available individually, allowing you to customize the configuration of your choice.

**Brand**

**High leadership condition**

- Leader in sofa manufacturing and home furnishings
- Based in the U.S.

**Low leadership condition**

- Sofa manufacturing and home furnishings
- Based in the U.S.