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# FOUR MORE YEARS: PRESIDENTIAL ELECTIONS, COMPARATIVE MINDSET, AND MANAGERIAL DECISIONS

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**Presidential elections reflect societal-level events that expose citizens to large amounts of comparative political information. We suggest that this exposure activates a "comparative mindset" that changes managers' business decisions in nonpolitical domains. In this state, managers are more likely to select from available options and increase their spending level. Four studies demonstrate this effect. Study 1 uses a quasi-experiment to show that U.S. firms, but not non-U.S. firms, spend more on advertising in U.S. presidential election years versus nonelection years. In a controlled business simulation, Study 2 shows that participants spend more on advertising and training in presidential election years versus nonelection years. Two experiments involving practicing managers follow. Study 3 exposes managers to comparative political information featuring a U.S. Senate election; we observe an increase in spending on training and development programs. Study 4 exposes managers to comparative political information for state-level political races, finding that doing so reduces the importance of negative information in the subsequent managerial decision process and leads to increased marketing spending. Moreover, shifting the decision frame from selecting to rejecting options restores the focus on negative information and attenuates the effect. We conclude with a discussion of the research's theoretical and practical contributions.**

Every four years on the Tuesday immediately following the first Monday in November, the citizens of the United States elect a president and vice president, 435 members of the House of Representatives, one-third of the members of the Senate, and numerous state and local officials. In 2016, the presidential race dominated the political landscape in part because of the historic nature of the race featuring the first woman (Democrat Hillary R. Clinton) nominated by a major political party and a candidate from outside the political firmament (Republican Donald J. Trump), in part because of the peculiar tone of the contest that yielded perhaps unprecedented media coverage, and in part because of the vast amounts of money raised and spent by the campaigns, estimated to be 9.8 billion USD (Kaye, 2017).

Much of the money raised by political campaigns is spent on advertising. Television spots, radio ads, print communication (including newspapers, direct mail, and so on), Web advertising, social media outreach, billboards, and yard signs are the principal vehicles through which candidates communicate (Public Disclosure Commission, 2019). These communications, as well as news reports and political debates, often explicitly or implicitly compare and contrast candidates. Our interest is in the high level

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of *comparative political information* that pervades the airwaves and print media, and the potential consequences this information might have on the behavior of citizens in *domains other than political persuasion*. We argue that exposure to a barrage of information from candidates and parties yields considerable opportunity for citizens to compare political candidates to inform their political choice. Sustained exposure to such comparative political information yields a "comparative mindset" among these citizens. We argue that, consistent with prior literature (Xu & Wyer, 2007, 2008), this comparative mindset spills over to other settings. As a consequence, managers (who are, like their fellow citizens, likely processing comparative political information) might adopt a comparative mindset in their professional roles, leading to higher levels of spending.

The model of decision making from which we draw relies on the premise that purchase decisions typically involve a three-step process: decision makers first decide *whether* to buy, then decide *which* to buy, and then *implement* the purchase (Chiang, 1991; Dhar & Nowlis, 2004; Xu & Wyer, 2007). The extant thesis is that, in the whether-to-buy stage, negative information plays a relatively important role because such information provides decision makers with diagnostic evidence that allows them to reject options that fail to reach a threshold level of performance (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Ito, Larsen, Smith, & Cacioppo, 1998). However, when a comparative mindset is activated, the first step (deciding whether to buy) is likely to be skipped, and the decision maker might proceed directly to the second (which to buy) comparative stage. When individuals begin the decision-making process at the which-to-buy (comparative) stage, negative information plays a reduced role, because decision makers seeking to select a superior option attach equal weights to both positive and negative features. Such a reduction in the importance of negative information ought to lead to increased spending because of enhanced perceptions of value (Rao & Monroe, 1989; Zeithaml, 1988). However, the role of negative information might return to prominence if the choice task emphasizes the rejection, as opposed to selection, of an option.

Based on this thesis, we observe from a quasi-experiment that, during presidential election years, spending in companies headquartered in the United States increases compared with a control group of companies headquartered outside the United States. This effect is replicated in a second quasi-experiment involving U.S. participants playing a business simulation game in presidential election years versus nonpresidential election years, and it becomes stronger in the fall, when exposure to comparative political information presumably reaches a peak as Election Day approaches (Holman & McLoughlin, 2001). Laboratory experiments that manipulate exposure to comparative political information confirm that exposure leads managers to spend more in making managerial decisions. These effects are mediated by reduced importance of negative information in the decision-making process. Finally, we observe that changing the decision frame by emphasizing the rejection, rather than the selection, of options eliminates the effect.

We contribute to the literature on managerial decision biases and theory of mindsets by proposing that comparative political information generated during presidential elections represents a unique societal-level environmental factor that activates a comparative mindset and increases managerial spending. This focus expands the management literature that has tended to emphasize individual-, group-, and organization-level factors that derail decision makers (Bunderson & Sutcliffe, 2002; Carney, Gedajlovic, Heugens, Essen, & Oosterhout, 2011; Fang Landis, Zhang, Anderson, Shaw, & Kilduff, 2015; Ketchen et al., 1997; Post & Byron, 2015). Further, our predictions and findings expand theory by offering insight into the process by which a comparative mindset influences spending outcomes, including identifying a reduction in the importance of negative information as well as how managerial overspending may be mitigated by adopting a rejection decision frame. Across these contributions, we expand the comparative mindset phenomenon from consumer psychology to managerial decision making, with attendant implications for management theory and practice.

## BACKGROUND

In light of the overwhelming amount of information to which managers are exposed, and because of bounded rationality (Cyert & March, 1963/1992; Simon, 1957), a substantial body of literature has examined the biases managers exhibit when making decisions. In particular, because there is a scarcity not of information but of attention (Simon, 1957: 167), managers might display selective attention to information. The information that is then attended to is likely subject to *cognitive* biases, such as confirmation bias, anchoring, and loss aversion (Kahneman, Lovallo, & Sibony, 2011), and *motivational* biases,

such as motivated information processing (De Dreu, Nijstad, & van Knippenberg, 2008). Further, because agents are unaware of their own biases and the potential adverse consequences of these on decision making, prescriptions to correct them abound (Kahneman et al., 2011).

A broad view of this literature points to multiple sources of managerial bias. First, research has identified individual psychological or demographic factors that influence how managers acquire and use information to make evaluations (e.g., Fang et al., 2015; Fast, Sivanathan, Mayer, & Galinsky, 2012; Haleblian & Finkelstein, 1993; Hillman, Cannella, & Harris, 2002; Koch, D'Mello, & Sackett, 2015; Post & Byron, 2015). Second, research has uncovered group and organizational factors that foster biases among employees and leaders across a range of decision contexts (e.g., Bunderson & Sutcliffe, 2002; Carney et al., 2011; Ketchen et al., 1997; Moorman & Day, 2016; Walsh, 1995; Westphal & Zajac, 1995).

However, the managerial bias literature has paid little attention to societal factors embedded in the firm's environmental context that might influence the nature and prevalence of these biases. Two prominent exceptions exist. Research in behavioral finance has found that macroeconomic factors such as recessions and booms influence managerial and household decisions (Baker & Wurgler, 2006; Gärling, Kirchler, Lewis, & Van Raaij, 2009). Still other research has identified the tendency for companies to herd and engage in mimicry (e.g., Hannan & Freeman, 1977).

We focus on a source of bias that lies well outside the boundaries of the existing literatures and their focus on motivational and cognitive distortions arising from the organizational setting or group and individual characteristics. Our research focuses on one *societal* factor—presidential elections—which are often accompanied by a substantial amount of comparative political information, including advertising, debates, and news. We argue that this societal-level phenomenon serves as an environmental prime that changes the process that managers use to make decisions, yielding a predictable bias in managerial decision making.[1]

[1] Any election with high levels of comparative political information may play this role. We focus on presidential elections as the societal-level environmental prime examined in our paper because they are the strongest instantiation of elections.

## THEORY DEVELOPMENT

### Overview

Given our objective to examine the influence of a societal factor on managerial spending through activation of a mindset, we begin by describing the mechanisms underlying mindset effects in general. We then draw from the literature on comparative mindsets that has demonstrated how making comparisons in one domain might induce biases (enhanced choice) in another domain. In particular, we review the theoretical argument for why and how comparative mindsets might induce an upward bias in choice likelihood, and then transition to explaining how a societal factor—prevalence of comparative political information during elections—might activate a comparative mindset to influence actual managerial spending. Furthermore, we theorize that the reduced importance of negative information mediates the effect of comparative political information on spending outcomes. Finally, we identify an element of the decision task—whether the decision frame is to select or to reject—that serves as a boundary condition for the effect.

### The Role of Mindsets in Decision Making

A *mindset* manifests when a particular cognitive procedure is activated and persists. Past research has shown that performing one cognitive operation or motor behavior while pursuing a goal can activate a mindset, which may spill over and guide the pursuit of a different goal. When this occurs, the cognitive procedure employed when pursuing an earlier goal is often reemployed in a subsequent, even unrelated, situation (e.g., Malkoc, Zauberman, & Bettman, 2010; Wyer, Xu, & Shen, 2012; Xu & Schwarz, 2018). For instance, a classic demonstration of the "Einstellung Effect" shows that once people figure out a complex rule to solve a set of math problems, that mindset persists and the same rule is employed to solve subsequent problems, even though the later problems can be solved with simpler rules (Luchins, 1942; Luchins & Luchins, 1959).

The literature is clear that the activation and employment of a mindset-related cognitive procedure is governed by general rules of knowledge accessibility (Förster & Liberman, 2007; Higgins, 1996; Xu & Schwarz, 2018). In particular, employing a cognitive procedure in performing a behavior is likely to increase its accessibility (Xu & Schwarz, 2018). Consequently, provided it is applicable to a new situation, this now accessible procedure is more

likely to be employed again when a new goal is pursued. Such reemployment is a manifestation of the spillover of the original mindset procedure.

Several different mindsets that influence decision making have been identified in the literature. For example, activating a calculative mindset by asking respondents to calculate the net present value of an investment or to solve math problems on the Graduate Record Examination leads to increased utilitarian judgments and to dampened emotional reactions when making subsequent decisions. As a result, people are more likely to overlook the moral consequences of their decisions and to act unethically (Wang, Zhong, & Murnighan, 2014). In a different domain, Moreau and Engeset (2016) showed that solving well-defined problems (such as building a LEGO house by following step-by-step instructions) activates a convergent thinking mindset, which impairs subsequent performance on creative tasks because creative problem solving requires the employment of divergent thinking.

### A Comparative Mindset Influences Subsequent Unrelated Decisions

The comparative mindset that emerges when individuals make comparisons between options has been found to increase the likelihood of making subsequent, unrelated, choices (Xu & Wyer, 2007, 2008). For instance, in one study, participants either read information about five pairs of products or services (unrelated to products they would encounter in a subsequent choice task) and indicated which item in the pair they preferred (comparative mindset condition) or did not perform this task (control condition). Those who had compared products and services displayed an enhanced likelihood of purchasing an unrelated discounted chocolate, relative to the control group (Xu & Wyer, 2007).

To account for this effect, Xu and Wyer (2007) posited the following three-step procedure when making a purchase decision (see Chiang, 1991; Dhar & Nowlis, 2004; Gao & Simonson, 2016). First, individuals consider whether any of the available options is above a threshold level of acceptance (i.e., deciding *whether to buy*). If more than one option is acceptable, in the second step they compare the options and decide which is preferred (i.e., deciding *which to buy*). In the third step, they decide how to *implement* the purchase. These three steps are pursued sequentially and are stored in memory as a script; the activation and completion of one stage automatically prompts the next stage in the process (Schank & Abelson, 1977). Therefore, once individuals have decided whether to buy, it is natural for them to consider which to buy as the next step in the process.

When individuals have been induced to make comparisons in a previous decision task, the *procedure* of comparing options becomes highly accessible and the individuals develop a comparative mindset. Consequently, when approaching the focal task with this mindset, individuals are likely to begin the decision process by comparing options. As a result, the whether-to-buy step is likely to be skipped altogether, which increases the likelihood of making a choice. Literature has shown that the comparative mindset can be induced by making comparisons in domains that are unrelated to the subsequent choice task (Xu & Wyer, 2007, 2008).

We now turn to the central idea we examine in this article, that a societal-level environmental factor in the form of elections can induce a comparative mindset among citizens who are exposed to comparative political information to inform their voting decisions. We examine this issue in a managerial decision context.

### Comparative Political Information Activates a Comparative Mindset

Candidates campaign to influence voters during all elections, but particularly during presidential election years. Consequently, citizens are exposed to a substantial amount of information (largely media advertising, as well as nationally televised debates and seemingly incessant media commentary) that compares and contrasts candidates. For example, according to *Adweek* and Nielsen Media Research, in 2016, the three Hillary Clinton–Donald Trump presidential debates and the Tim Kaine–Mike Pence vice presidential debate attracted a total of 259 million viewers (Katz, 2016). As a result, most individuals, including managers, are provided ample opportunity to compare the political candidates and their policies in order to select a candidate for whom they will vote.

Political campaigns influence voters, otherwise candidates would not raise and spend vast sums of money on such campaigns. However, it is unclear whether this environmental factor impacts preferences and decisions in domains other than political choice. In other words, does the barrage of comparative political information influence whether and how people make decisions in other areas of their lives? We develop the argument that frequent

exposure to comparative information about political candidates indeed activates a comparative mindset, which persists and predisposes people to make comparative judgments about options in decisions outside the political domain.

One rule governing knowledge accessibility is particularly important in predicting the influence of comparative political information on activating a comparative mindset. Specifically, the likelihood that a cognitive procedure is activated and applied in a subsequent situation depends on both the *recency* and *frequency* with which it has been used in the past (Wyer & Xu, 2010; see Bargh, Bond, Lombardi, & Tota, 1986). Previous research on the comparative mindset effect has only documented the recency effect, in which a mindset is activated by making comparative judgments immediately before the focal decision task. In contrast, during elections, managers are frequently exposed to comparative news, social media, and advertising stimuli. Because of this exposure, comparative judgment procedures become *chronically accessible* during that year, and these procedures consequently spill over into other arenas of managerial decision making, such as purchasing.

The next section further develops our theory regarding why and how a chronically accessible comparative mindset elicited by the presence of comparative political information in elections should impact managerial spending in business organizations.

## The Effect of Comparative Political Information on Managerial Spending

Organizations purchase large quantities of goods and services, either for direct use or as inputs for processes that yield output that is then sold to the next level of the supply chain. A large amount of research has examined how organizations buy, drawing from theories such as transaction cost economics (Heide, Kumar, & Wathne, 2014) and perspectives from organizational behavior (Elfenbein & Zenger, 2014, Ody-Brasier & Vermeulen, 2014).

We argue that it is plausible that organizational buyers employ a sequential decision process mirroring the individual purchasing decision process suggested by Xu and Wyer (2007). That is, managers likely utilize a general decision-making process that involves deciding whether to buy, which to buy, and how to implement the purchase. For example, when a competitor launches an advertising campaign, managers need to decide whether to respond with a counter-campaign, which media to use, and how to implement the plan. Similarly, managers might need to decide whether they need to add to their product line, which offerings to expand, and how to implement the strategy (e.g., through in-house manufacturing, partnerships, licensing, or acquisition). One additional element might be pertinent in how managers implement the decision. That is, once managers have made decisions on whether and which to purchase, they often need to decide *how much to spend*. For example, if a manager decides to advertise a product, they must then decide how much to spend on advertising, or if a manager decides to launch an employee training program, they must then decide how much to spend on this initiative.

According to our theory, when a comparative mindset is created among managers, either through direct experience or through societal influences such as exposure to comparative political information in elections, they are likely to spend more. We predict that this happens because the comparative mindset and associated tendency to skip the whether-to-buy step reduce a natural focus on negative information in the decision process.

Specifically, we propose that negative information plays different roles in deciding whether-to-buy and which-to-buy. In the whether-to-buy step, each option is evaluated on both positive and negative attributes to make an overall assessment regarding whether options meet a threshold of acceptance. In this process, decision makers likely attach greater weight to negative information than to positive information. This view builds on the negativity bias literature, which has suggested that negative information is generally viewed to be more diagnostic than positive information when forming overall evaluations of options (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Bednar, Boivie, & Prince, 2013; Ito et al., 1998; Peeters & Czapinski, 1990; Skowronski & Carlston, 1989). Moreover, in the whether-to-buy step, not selecting an option is a real possibility, which yields further emphasis on negative information about the options. Therefore, decision makers attach more weight to negative information than to positive information in the whether-to-buy step.

However, when the comparative mindset has been activated and decision makers skip the whether-to-buy step and proceed directly to the which-to-buy step, we theorize that they are likely to focus on feature-by-feature comparisons and finding out which option has a greater number of superior attributes (Mantel & Kardes, 1999; Nowlis & Simonson, 1997). In this process, negative information is not necessarily more diagnostic; instead, relatively equal weights are attached to both positive and negative

information. Therefore, when exposure to comparative political information predisposes decision makers to proceed directly to the which-to-buy step, the importance of negative information is likely to reduce.

Building on the above reasoning, we suggest that the reduced importance of negative information should also increase the expectation that the value associated with the selected options—the products and services being purchased—will be higher. This value assessment, which is the difference between the benefits and costs associated with a choice option (Rao & Monroe, 1989; Zeithaml, 1988), should increase spending levels. Therefore, we predict:

*Hypothesis 1. Exposure to comparative political information increases managerial spending.*

*Hypothesis 2. The positive effect of exposure to comparative political information on managerial spending is mediated by a reduction in the importance of negative information.*

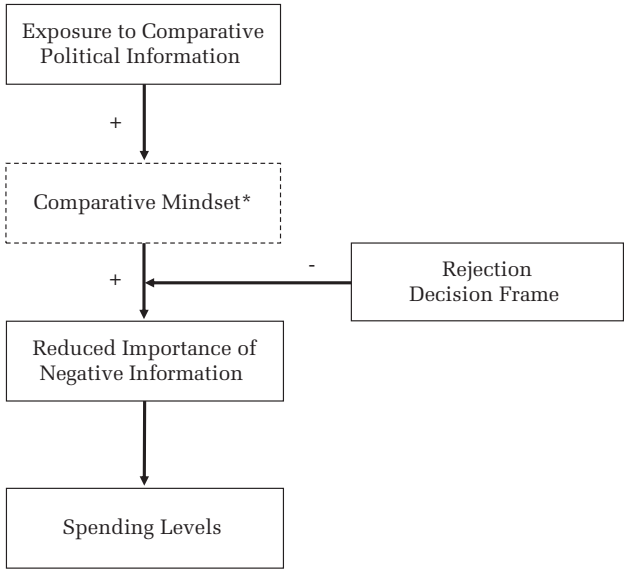
### Selecting versus Rejecting: The Moderating Role of Decision Frame

Our thesis regarding the role of the importance of negative information in Hypothesis 2 is likely to be contingent on the decision frame that managers adopt. Specifically, when the task is to *select* among options, the expected diminution in negativity is likely due to a comparative mindset induced by exposure to comparative political information. However, if the individual's task is to *reject* undesirable or unacceptable options from a set of alternatives, then negative information might remain prominent. For example, the literature has suggested that a rejection decision frame leads to greater focus on the negative attributes of the choice options (Chernev, 2009; Shafir, 1993; Soman, 2004). Further, when asked to reject options, individuals are likely to focus on negative information, as this information is a central indicator of whether an option should be rejected. We draw from this literature to propose a novel boundary condition. Framing the decision task as the rejection of an option rather than the selection of an option ought to reverse the diminution of the weight associated with negative attributes. As a result, the comparative mindset effect induced by exposure to comparative political information should be attenuated.

This argument reveals an important nuance regarding the decision process. Our thesis is that, barring exposure to comparative political information, managerial decision makers will employ a standard decision process, which involves deciding (a) whether to buy, (b) which to buy, and (c) how to implement the purchase (including how much to spend). Exposure to comparative political information generates a comparative mindset that short-circuits this three-step process. Instead, decision makers employ a two-step process (which to buy, and how much to spend as part of the implementation step) and attach reduced weight to negative information. If, however, an unrelated decision involves a task with characteristics that prevent the diminution of negative information from occurring—in our case, by emphasizing rejection as opposed to selection—the comparative mindset induced by exposure to political information is not expected to influence unrelated spending decisions. In other words, the natural consequence of a comparative mindset might itself be short-circuited by the nature of the task facing the decision maker. Formally:

*Hypothesis 3. When confronted with a rejection as opposed to a selection frame, the positive effect of exposure to comparative political information on manager spending will be attenuated due to an increased emphasis on negative information.*

**FIGURE 1**
**Conceptual Framework**




*Notes:* Comparative mindset represents a mental state that is elicited by exposure to comparative political information and drives the subsequent effects on importance of negative information and spending levels in nonpolitical domains. We use a dashed box to indicate this unmeasured mental state in our model.

The conceptual framework that informs our predictions is summarized in Figure 1.

## OVERVIEW OF STUDIES

We conducted four empirical studies to assess support for our predictions. Studies 1–4 address Hypothesis 1, while Study 4 addresses Hypothesis 2 and Hypothesis 3. We operationalize exposure to comparative political information by examining the effect of presidential election year on managerial spending in Study 1. In Study 2, we test Hypothesis 1 in two ways. Following Study 1, we again use presidential election year to operationalize exposure to comparative political information. We also use temporal proximity to Election Day as an additional test to assess whether the intensity of campaign activities and voter attention to political information is likely to increase as Election Day approaches. Studies 3 and 4 manipulate the presence of comparative political information in contexts of state level elections.

Specifically, Study 1 analyzes secondary data using a quasi-experiment that compares marketing spending by U.S. firms during quadrennial election-year contests with spending in nonelection years, relative to a control group of non-U.S. firms. Study 2, also a quasi-experiment, compares spending decisions made by U.S. MBA and executive MBA students in a business simulation conducted during a presidential election year versus other time periods. Because the simulation had fixed and consistent parameters during the data collection periods, we are able to rule out several alternative explanations that might account for firms' spending decisions during presidential election years and investigate whether spending levels increased even further in the fall term, which is closer to Election Day.

Two follow-up laboratory experiments replicate the positive effect of exposure to comparative political information on managerial spending, and also examine the underlying mechanism of the reduced importance of negative information. Study 3 shows that exposure to comparative political information (versus nonpolitical information) activates a comparative mindset, which consequently increases spending levels (as well as choice likelihood) in a managerial decision context. Study 4 presents a more conservative test of Hypothesis 1 by manipulating exposure to *comparative* political information versus *noncomparative* political information. It also tests the underlying mechanism of the importance of negative information, and examines whether a rejection decision frame (versus a selection frame) attenuates the effect of exposure to comparative political information on spending (as well as choice likelihood) through a change in the weight attached to negative information. This combination of methods speaks to both internal and external validity issues, as well as to the underlying process.

## QUASI-EXPERIMENTS: STUDIES 1 AND 2

### Study 1

This study tests Hypothesis 1 by using U.S. presidential election years to operationalize exposure to comparative political information. We use a quasi-experimental setup that allows for control over the scheduling of data collection or measurement without control over the scheduling of experimental stimuli (Campbell & Stanley, 1963; Cook & Campbell, 1979). Specifically, we analyze secondary data about firms' advertising expenditures from a sample of U.S. companies compared with spending by a control group of non-U.S. companies. We suggest that during election years, managers of U.S. firms are exposed to intensive political advertising and information that compares candidates, based on which they make judgments about candidates and decide for whom to vote. Given this exposure, a comparative mindset becomes chronically accessible and is likely to spill over onto other decisions, disposing managers to increase discretionary spending during this time period. However, the U.S. presidential elections ought not to influence discretionary spending decisions made by managers in firms located outside the United States due to (a) their relatively limited exposure to the campaigns and (b) the lower likelihood that non-U.S. managers would attend to these comparative advertisements in a goal-directed fashion (i.e., to make judgments about or select a candidate).

Managers are, of course, exposed to elections in their own countries, which have cycles that differ from those in the United States. However, these elections occur across companies in our sample with no visible pattern, and should not influence our results. Our robustness checks profile one non-U.S. country for which we have a large enough sample to show that the international sample is also influenced by elections in their own country in the same way.

***Setting and sample.*** The sample of U.S. firms was drawn from Kantar Media's Ad$pender database.[2]

[2] The database can be accessed at: https://www.kantarmedia.com/us/login-hub/advertising-monitoring-evaluation/adspender.

We focused on the Top 1,000 Advertising Spenders listed in Ad$pender. Beginning with the Top 1,000 list in 2001, we then cross-referenced this year with lists from the 1990s (using 1993) and the 1980s (using 1985), adding unique firms that appeared during these years. These years were randomly chosen from each of the three decades to create a sample of firms that could be studied across a large number of presidential election years. This effort produced a sizable panel of 1,907 unique firms found across all three periods. We then determined whether firms in the sample were public (necessary to observe advertising data in Compustat), headquartered in the United States, and had data for at least four consecutive years (to include one presidential election year), given our desire for a panel structure. Our final sample of public U.S. firms was a panel of 800 firms with 19,463 firm-year observations. We collected firm spending and other firm control variables from this sample across the period 1950–2011 to capture a large number of presidential election years.

Our control group was a sample of non-U.S. firms operating during the same period as our U.S. firms, but whose headquarters were located outside the United States. We identified the population of firms headquartered outside of the United States through the Compustat database (1950–2011)—those firms are listed because they are traded as American Depository Receipt stock, which is stock that trades on U.S. exchanges but represents shares in a foreign corporation. As with the U.S. sample, we dropped firms whose data were available for fewer than four sequential years. Our final sample of public international firms was a panel of 301 firms with 8,072 firm-year observations.

***Measures.*** Our main dependent variable was *firm advertising spending level,* as measured by the company's reported advertising dollars spent in the year on advertising media (radio, television, newspapers, and periodicals) and promotional expenses. We collected available Compustat data for each variable in our model for each firm in each year, from 1950 to 2011.

*Presidential election* was a dummy variable coded 1 for each of the 15 years in our sample involving presidential elections (1952, 1956, 1960, 1964, 1968, 1972, 1976, 1980, 1984, 1988, 1992, 1996, 2000, 2004, and 2008) and 0 otherwise. *U.S. headquarters* was coded using the headquarter country code (LOC) in Compustat. Companies with U.S. headquarters were coded 1, and those headquartered outside of the United States were coded 0. A *time trend* variable was included as the number of years past the baseline 1950 to account for the fact that advertising expenditures might change over time.

***Analyses.*** Past literature has indicated that advertising is dynamic in nature (e.g., Dekimpe & Hanssens, 1999; Steenkamp, Nijs, Hanssens, & Dekimpe, 2005). Therefore, we used a fixed-effects autoregressive panel forecasting model (Arellano & Bond, 1991) to estimate the influence of presidential elections on advertising spending. This procedure yields consistent estimates by removing unobserved firm heterogeneity. Additional lagged values of the dependent variable were included in the model if they had a significant effect on spending and if the current number of lags was not sufficient to eliminate serial correlation in the error terms. In all similar analyses that followed, the number of lags was empirically determined in the same fashion. We also conducted a unit root test, which tests whether the statistical properties of a given time series are constant over time. In a unit root test, the null hypothesis is generally defined as the presence of a unit root that incurs unpredictable changes, whereas the alternative hypothesis is that the time series are stationary (Hsiao, 2014). With this test, we found that advertising spending level was stationary (inverse logit $t\,(3{,}674) = -29.148$, $p < .0001$).

To test Hypothesis 1, we estimated the following fixed-effect autoregressive panel forecasting model:

$$\begin{aligned} Spend_{it} = {} & a_0 + a_1{*}Spend_{it-1} + a_2{*}Spend_{it-2} \\ & + a_3{*}Trend_t + a_4{*}Election_t \\ & + a_5{*}Election_t{*}U.S.\_Headquarters_i \\ & + a_i + \nu_{it} \end{aligned} \quad (1)$$

where $Spend_{it}$ is advertising spending for firm $i$ in year $t$ and $Spend_{it\text{-}1}$ and $Spend_{it\text{-}2}$ are one-year and two-year lagged spending values, respectively. $Trend_t$ is the time trend. $Election_t$ is a dummy indicating whether year $t$ is a presidential election year. $U.S.\_headquarters_i$ is the location of firm $i$'s headquarters (in the United States or not), which can technically vary over time. However, in our sample of firms, it did not. The remaining model terms are $\alpha_i$, a firm-specific fixed effect, and $\nu_{it}$, the error term for firm $i$ in time $t$. Given our use of a fixed-effects model, the main effect of *U.S._headquarters* dropped out of the model.

***Results.*** Descriptive statistics appear in Table 1 and regression results appear in Table 2. Without the interaction of presidential election and U.S. headquarters (Model 1), the presidential election was positively related to advertising spending ($\alpha_4 = 1.42$, $p < .001$). To test the differential effect of the presidential election on

**TABLE 1**
**Study 1 Descriptives and Correlation Matrix**

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Advertising Spending | 1 | | | |
| 2. Time Trend | 0.22*** | 1 | | |
| 3. Presidential Election | 0.00 | −0.01* | 1 | |
| 4. U.S. Headquarters | 0.11*** | 0.11*** | −0.01 | 1 |
| *Mean* | 82.68 | 37.38 | 0.24 | 0.71 |
| *SD* | 321.99 | 14.06 | 0.43 | 0.46 |

*Notes:* $n$ = 27,535 observations; advertising spending in million USD; time trend in years; presidential election: 1 = presidential election year, 0 = nonpresidential election year; U.S. headquarters: 1 = U.S. headquarters, 0 = non-U.S. headquarters.
*$p < 0.05$
**$p < 0.01$
***$p < 0.001$

U.S. and foreign companies, we entered the interaction of presidential election and U.S. headquarters (Model 2). The overall fit of the model for advertising spending was significant (Wald $\chi^2$ (5) = 584.19, $p < .001$) without serial correlations in the error terms ($z = -1.219$, n.s.). The third-order effect of past advertising was insignificant ($\alpha = -0.047$, n.s.), so it was not included in the final model. As predicted, we observed a positive significant effect of *Election* × *U.S._headquarters* for firm advertising spending ($\alpha_5 = 2.06$, $p = .007$). A simple slope analysis shows that for U.S. firms advertising spending increased significantly during presidential election years ($\alpha = 2.14$, $p = .001$), while for non-U.S. firms the effect was not significant ($\alpha = 0.08$, n.s.). These results support Hypothesis 1.

***Robustness.*** First, if our theory is correct, our results should hold when considering the election cycle of non-U.S. countries in our international sample of firms. One challenge in conducting such an analysis is that there are very few countries for which we have a large enough sample of firms to test our model. One country that does have a sufficient number of companies is Canada ($n$ = 209 firms, 5,754 firm-year observations). It is also advantageous that Canadian general elections, albeit parliamentary, generally feature two major parties that tend to accentuate comparisons, and that the Canadian electorate and media markets are similar to those in the United States. We ran our main effects model (Model 1) on the Canadian sample and found that the impact of Canadian elections on Canadian firms' advertising spending is significantly higher during Canadian election years versus nonelection years ($\alpha_4 = 0.04$, $p < .001$) (see Web Appendix A for details).

**TABLE 2**
**Study 1 Results (Dependent Variable: Firm Advertising Spending)**

| | Model 1 Coefficient (*SE*) | Model 2 Coefficient (*SE*) |
|---|---|---|
| Intercept ($\alpha_0$) | −19.67 (7.94)* | −19.71 (8.04)* |
| One-Year Lag Firm Advertising Spending Levels ($\alpha_1$) | 0.50 (0.10)*** | 0.50 (0.10)*** |
| Two-Year Lag Firm Advertising Spending Levels ($\alpha_2$) | 0.17 (0.07)** | 0.17 (0.07)** |
| Trend ($\alpha_3$) | 0.92 (0.31)** | 0.92 (0.31)** |
| Presidential Election ($\alpha_4$) | 1.42 (0.40)*** | 0.08 (0.41) |
| Hypothesis 1: Presidential Election *U.S. Headquarters ($\alpha_5$) | | 2.06 (0.76)** |
| Number of Firm-Year Observations | 27,535 | 27,535 |
| Number of Firms | 1101 | 1101 |
| Wald $\chi^2$ (4) / Wald $\chi^2$ (5) | 579.49 | 584.19*** |

*Notes:* Advertising spending in million USD; time trend in years; presidential election: 1 = presidential election year, 0 = nonpresidential election year; and U.S. headquarters: 1 = U.S. headquarters, 0 = non-U.S. headquarters.
*$p < 0.05$
**$p < 0.01$
***$p < 0.001$

Second, one assumption in our argument is that U.S. presidential elections do not generate a comparative mindset among managers of non-U.S. firms because their level of involvement and resultant comparisons of political candidates is lower, since they do not have a goal of making judgments about or selecting a candidate for whom they will vote (i.e., a choice goal). We tested this premise, found support for it, and report the results in Web Appendix B.

Finally, election cycles in the United States often begin early because they feature primary races, so the election effect may start taking place the year prior. Thus, we recoded *Election* to include both the election year and the year prior. The two-year election effect of *Election* × *U.S._headquarters* on firm advertising spending is significant and consistent with the result employing only the election year ($\alpha_5 = 3.19$, $p = .003$). Importantly, the simple slope analysis shows that for U.S. firms, the two-year election effect on advertising spending is significant ($\alpha = 3.02$, $p < .001$), while it is not significant for non-U.S. firms ($\alpha = -0.17$, n.s.).

***Testing rival explanations.*** Two alternative explanations specific to the influence of presidential elections on spending decisions are now considered. First, managers might spend more on advertising during presidential election years because they believe consumers pay more attention to commercial advertising during elections. To test this explanation, we surveyed managers about their expectations on how presidential elections may influence consumer behavior. A total of 213 marketing managers recruited from a local chapter of the American Marketing Association (AMA) and a Qualtrics panel completed the survey (average age = 44.12 years [*SD* = 14.09], average work experience = 20.83 years [*SD* = 12.86], average level of highest position obtained in their career = 6.91 [*SD* = 2.30)]on a 10-point scale [1 = Entry level to 10 = President or CEO level]). Among other items, respondents indicated whether "Customer view of commercial advertising" and "Customer interest in viewing commercial advertising" would increase (coded as 1), decrease (coded as −1), or exhibit no change (coded as 0) in presidential election years. The mean score of each item was tested against 0. Variables with missing data were automatically omitted from the analyses. Managers expected that both customer viewing of commercial advertising ($M_{\text{view\_commercial\_ad}} = -0.17$, $t\,(210) = -3.13$, $p = .002$) and their interest in viewing commercial advertising ($M_{\text{interest\_commercial\_ad}} = -0.22$, $t\,(209) = -4.07$, $p < .001$) would *decline* in election years relative to nonelection years, refuting this alternative explanation.

Second, increased advertising spending during presidential election years may be a consequence of an increase in the price of ads, because political campaigns purchase lower-priced advertising slots, thus leaving only higher-priced slots for commercial advertisers, or due to increased price competition for all slots (see Moshary, 2015). To test this explanation, we examined Kantar Media data on yearly national advertising volume and spending levels from 61 industries (1986–2011) both at the aggregate level and across 13 different media (e.g., TV, magazines, and newspapers). Since ad price information was not available, we calculated the average price of advertising overall and for each media type by dividing the total advertising dollars spent by the number of ads run. The average price of advertising did not change, nor did the price of television advertising, though the price of magazine advertising *declined* during presidential election years (see Web Appendix C for details).

***Discussion.*** Consistent with Hypothesis 1, results of this quasi-experiment demonstrate that exposure to comparative political information during U.S. presidential elections influences managers' decisions in nonpolitical domains. While ruling out rival explanations, our results can be challenged in important ways. We report next on a second quasi-experiment conducted in a more controlled setting, in which we analyze spending decisions made by participants with significant managerial experience (i.e., executive MBA and MBA students) playing a business strategy simulation.

## Study 2

Study 2 tests Hypothesis 1 in two ways. Similar to Study 1, exposure to comparative political information was operationalized by using presidential election versus nonelection years (i.e., the primary independent variable). However, within election years, the frequency of exposure, as well as the attention of voters to political information, changes over time. In particular, the intensity of campaign activities and voter attention to political information increases as Election Day approaches. For example, in the 2000 federal elections, candidates aired 50% of their ads, party committees aired 50% of their ads, and independent groups aired 60% of their ads in the final four weeks of the campaign (Holman & McLoughlin, 2001). Hence, the comparative mindset effect should become stronger as Election Day nears. Therefore, we also use temporal proximity to

elections as an independent variable that should heighten the spending effect.

***Setting and sample.*** The unit of analysis was teams of executive MBA and MBA students making decisions while playing StratSim, a business strategy simulation. Teams managed one of five firms (Firms A–E) that compete in an industry. The starting characteristics of Firms A–E did not change over the course of our data collection, and we used firm-specific indicators to control for firm heterogeneity. At the beginning of each period, teams reviewed their financial performance from the prior period and submitted a series of spending decisions for the current period. We focused on (a) advertising expenditures, because this approach replicates Study 1 without the potential confounds; and (b) training expenditures, which allows us to assess the impact of presidential elections on another key management spending decision.

Three years of StratSim data (2002–2004) were purchased from Interpretive Software in 2005. In 2013, we attempted to acquire data from 2005 to the present, but the data were no longer available. In light of this, we analyzed the three years of data available with a focus on comparisons between nonelection years (2002 and 2003) and the election year (2004).

Advertising and training spending decisions were made during each period by firms in each industry. The data included students playing the simulation in 93 industries across U.S. universities. Each industry contains five firms making up to 11 periods of decisions. Both advertising and training spending decisions were made at the product level, and products varied across the course of the game as firms added to and deleted products from their portfolios. The sample of 465 firms produced 2,662 industry–firm–product combinations and 18,186 industry–firm–product–period observations.

The criteria for deciding the number of additional lags to include in our model were the same as those employed in Study 1. Following these rules, we again included one period of lagged value for advertising spending, and our advertising spending model sample dropped to 2,516 industry–firm–product and 15,524 industry–firm–product–period observations. The unit root test for advertising spending level was stationary (inverse logit $t(7{,}498) = -34.795$, $p < .0001$), while the unit root test for training spending level was not (inverse logit $t(7{,}344) = 6.789$, n.s.). In light of this, it was necessary to use a first-difference measure of training spending (i.e., the difference between current and prior period training spending) in the analysis instead of training spending level (Hsiao, 2014). As a result, we lost another period of observations for the training spending models (2,349 industry–firm–product and 13,008 industry–firm–product–period observations).

***Analyses.*** We first examined the main effect of the presidential election on advertising or training expenditures as a test of Hypothesis 1. We controlled for whether the team playing comprised executive MBA or MBA students with an *EMBA* dummy variable. Finally, since schools only played during certain terms of the year, the effect of presidential elections was time-invariant for each team's decisions and dropped out in a fixed-effects model. Therefore, we used a random-effects panel model.

Further, since teams played the games in the spring, summer, or fall terms, we further explored the effect of presidential elections by including the interaction of *Election* × *Fall* (as well as a dummy variable for fall) in the model. If, consistent with our expectations, exposure to the presidential election induced the comparative mindset, this effect should have grown stronger when simulations were played during the fall as the Election Day neared. The following model was estimated:

$$\begin{aligned} Spend_{ifpt} = {} & a_0 + a_1{*}Spend_{ifpt-1} + a_2{*}Trend_i \\ & + a_3{*}EMBA_i + a_4{*}Election_i \\ & + a_5{*}Fall_i + a_6{*}Election_i{*}Fall_i \\ & + a_{7-}a_{10}{*}Firm\_Dummies_f + a_{ifp} + \nu_{ifpt} \end{aligned} \quad (2)$$

where $Spend_{ifpt}$ is the advertising or training expenditure for product $p$ of firm $f$ in industry $i$ in period $t$ and $Spend_{ifpt\text{-}1}$ is one-period lagged-spending values; $Trend_i$ is the year trend, given that teams played in different years; $EMBA_i$ is a dummy indicating whether students were executive MBAs; $Election_i$ is a dummy indicating whether industry $i$ was played in a presidential election year; and $Fall_i$ is the dummy indicating whether the industry was played in the fall. $Firm\_Dummies_f$ controls for firm heterogeneity, $\alpha_{ifp}$ is the industry–firm–product random effect, and $\nu_{ifpt}$ is the error term, $\nu_{ifpt} \sim N(0, \sigma^2_{ifpt})$. Because our observations across time were nested within products, products were nested within firms, and firms were nested within industries, we used robust-clustered standard errors to prevent biased results (Wooldridge, 2010). Specifically, we accounted for three sources of nesting simultaneously by clustering the standard errors at the industry–firm–product level.

***Results.*** Descriptive statistics are presented in Table 3 and regression results are presented in Table 4 (part (a) for advertising and part (b) for training). Without the interaction term (*Election* × *Fall*), the results in Model 1 reveal a positive and significant effect of *Election* on advertising spending ($\alpha_4 = 7.06$, $p < .001$) and training spending ($\alpha_4 = 2.81$, $p = .009$), supporting Hypothesis 1. To test the effect of intensity of exposure to comparative political information, we entered the term *Election* × *Fall* in Model 2. Its effect was positive and significant for advertising spending ($\alpha_6 = 7.62$, $p < .001$) and training spending ($\alpha_6 = 4.29$, $p < .001$), indicating that the effect of presidential elections on spending is stronger in the fall relative to the spring and summer. Additional simple slope analyses showed that advertising spending increased significantly in the fall of presidential election years ($\alpha = 6.36$, $p < .001$), but this effect was not significant for nonelection years ($\alpha = -1.26$, n.s.). An identical pattern was found for training spending, which increased significantly in the fall of presidential election years ($\alpha = 4.48$, $p < .001$), but was not significant in nonelection years ($\alpha = 0.19$, n.s.). These results support Hypothesis 1 and are consistent with the notion that the effect ought to become stronger with temporal proximity to an election.

***Discussion.*** This study employed another quasi-experiment to demonstrate that exposure to comparative political information in elections influences managers' decisions in nonpolitical domains, consistent with Hypothesis 1. Specifically, Study 2 first finds that discretionary managerial expenditures increase during periods when the environment features comparative political information. In addition to this main effect, the results revealed an *Election* × *Fall* interaction, showing that the positive effect of presidential election on managerial spending is even stronger in the fall when Election Day approaches (and comparative political information is released more frequently and intensively). This finding provides further support for our theory positing that the frequency of exposure to the environmental prime affects the strength of the comparative mindset and, consequently, the degree of its impact.

Although we eliminate two rival explanations in Study 1, both Studies 1 and 2, by virtue of being quasi-experiments, cannot rule out all possible alternative explanations. For example, high election spending, while not driving up the price of advertising, may make firm spending seem more normatively appropriate or smaller by comparison. To resolve this issue, Studies 3 and 4 manipulate comparative political information in an experiment.

## EXPERIMENTS: STUDIES 3 AND 4

Our experiments were designed to focus on internal validity and process measures. We manipulate independent variables and measure our dependent variables, as well as variables that provide evidence regarding the process that likely accounts for the phenomenon. Further, we measure a series of control variables that allow us to exclude rival explanations for our findings.

**TABLE 3**
**Study 2 Descriptives and Correlation Matrix**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Advertising Spending | 1 | | | | | |
| 2. Training Spending | 0.20*** | 1 | | | | |
| 3. Time Trend | 0.03*** | 0.03*** | 1 | | | |
| 4. Presidential Election | 0.08*** | 0.04*** | 0.90*** | 1 | | |
| 5. EMBA | −0.02* | −0.00 | −0.18*** | −0.26*** | 1 | |
| 6. Fall | 0.10*** | 0.05*** | −0.05*** | 0.02* | 0.25*** | 1 |
| *Mean* | 103.19 | 9.70 | 2.41 | 0.56 | 0.05 | 0.45 |
| *SD* | 81.58 | 29.96 | 0.73 | 0.50 | 0.22 | 0.50 |

*Notes:* $n = 15{,}524$ observations for advertising spending and $n = 13{,}008$ for training spending; advertising and training spending in thousand USD; time trend in years; presidential election: 1 = presidential election year, 0 = nonpresidential election year; EMBA: 1 = Executive MBA students, 0 = MBA students; Fall: 1 = fall season, 0 = nonfall seasons.

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

**TABLE 4a**
**Study 2 Results (Dependent Variable: Firm Advertising Spending)**

| | Model 1 | Model 2 |
|---|---|---|
| | Coefficient (SE) | Coefficient (SE) |
| Intercept ($\alpha_0$) | 10.46 (2.23)*** | 12.03 (2.26)*** |
| One-Year Lag Firm Advertising Spending ($\alpha_1$) | 0.97 (0.01)*** | 0.97 (0.01)*** |
| Trend ($\alpha_2$) | −2.96 (0.97)** | −3.44 (0.94)*** |
| EMBA ($\alpha_3$) | −2.01 (0.82)* | −1.12 (0.95) |
| Hypothesis 1: Presidential Election ($\alpha_4$) | 7.06 (1.47)*** | 4.35 (1.47)** |
| Fall ($\alpha_5$) | | −1.26 (0.88) |
| Hypothesis 2: Presidential Election × Fall ($\alpha_6$) | | 7.62 (1.34)*** |
| Number of Industry–Firm–Product–Period Observations | 15,524 | 15,524 |
| Number of Industry–Firm–Product Observations | 2,516 | 2,516 |
| Wald $\chi^2$ (8) / Wald $\chi^2$ (10) | 9164.65*** | 9403.47*** |

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

## Study 3

Our first lab experiment tests Hypothesis 1 by exposing participants to comparative political information in an election context or nonpolitical information in a control context, and assessing spending outcomes. We also measure choice likelihood prior to spending levels to reflect the natural progression of decision making. The comparative political information condition employed election stimuli featuring a U.S. Senate mid-term contest in Tennessee in the fall of 2018; pre-election polling indicated that the race was relatively close. The control condition featured an overview of the State of Tennessee (see details below). Participants were practicing human resource managers who were asked to choose from and spend on employee training and development programs.

***Method.*** Human resource (HR) management professionals from two chapters of the Society for Human Resource Management (SHRM) participated in this study in exchange for a chance to win a gift card. Officers of those two local SHRM chapters distributed the survey invitations by email. A total of 126 participants responded to our survey; however, 22

**TABLE 4b**
**Study 2 Results (Dependent Variable: Firm Training Spending)**

| | Model 1 | Model 2 |
|---|---|---|
| | Coefficient (*SE*) | Coefficient (*SE*) |
| Intercept ($\alpha_0$) | 9.14 (1.33)*** | 9.03 (1.34)*** |
| One-Year Lag Firm Training Spending ($\alpha_1$) | 0.16 (0.06)** | 0.16 (0.06)** |
| Trend ($\alpha_2$) | −0.44 (0.64) | −0.39 (0.67) |
| EMBA ($\alpha_3$) | 0.80 (0.77) | 0.68 (0.98) |
| Hypothesis 1: Presidential Election ($\alpha_4$) | 2.81 (1.07)** | 0.75 (1.08) |
| Fall ($\alpha_5$) | | 0.19 (0.79) |
| Hypothesis 2: Presidential Election × Fall ($\alpha_6$) | | 4.29 (1.09)*** |
| Number of Industry–Firm–Product–Period Observations | 13,008 | 13,008 |
| Number of Industry–Firm–Product Observations | 2,349 | 2,349 |
| Wald $\chi^2$ (8) / Wald $\chi^2$ (10) | 76.09*** | 128.12*** |

*Notes:* Advertising and training spending in thousand USD; time trend in years; presidential election: 1 = presidential election year, 0 = nonpresidential election year; EMBA: 1 = Executive MBA students, 0 = MBA students; and Fall: 1 = fall season, 0 = nonfall seasons. Model also contains four firm dummies.

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

participants dropped out before responding to questions in the dependent variable task, and one participant skipped the manipulation task. This left us with a sample size of 103. Average age was 44.47 years ($SD$ = 11.83), work experience was 20.86 years ($SD$ = 10.73), and highest position obtained was 6.27 ($SD$ = 2.60) on a 10-point scale (1 = Entry level to 10 = President or CEO level). Participants were randomly assigned to one of two conditions in a single factor (condition: election vs. control) between-subjects design.

Upon clicking on the survey link, participants were informed that they were going to participate in two studies. The first study was a survey about an article that appeared on the website of a local newspaper, *The Tennessean*, and the second study was a managerial decision survey.

In the *election* condition, the survey in the first study asked participants to read a newspaper article containing comparative political information that covered information about two candidates running for a U.S. Senate seat in the 2018 midterm elections in the state of Tennessee. The article introduced the candidates, discussed their backgrounds, and contrasted their stands on education and healthcare issues. Upon reading the article, participants reported their opinions about the candidates (i.e., "On the issue of education, which candidate's views do you support?", "On the issue of healthcare, which candidate's views do you support?", and "Which candidate would you support if you were to vote?") on 11-point scales anchored at "Definitely [Name of Candidate A]" and "Definitely [Name of Candidate B]."

In the *control* condition, the survey asked participants to read a newspaper article providing information about the state of Tennessee's history, geography, economy, education, etc. Upon reading the article, participants evaluated the state along several dimensions (i.e., "How would you evaluate the economy of the State of Tennessee?" 0 = Not at all healthy, 10 = Very healthy; "How would you evaluate the education system in the State of Tennessee?" 0 = Not at all competent, 10 = Very competent; "How would you evaluate the State of Tennessee as a place to live?" 0 = Not at all attractive, 10 = Very attractive). Web Appendix D contains stimuli details.

After completing the first newspaper article survey, all participants were asked to play the role of a HR director of a large organization that had different functional departments, including production, research and development, purchasing, marketing, human resource management, accounting, and finance. Participants were told that they had a budget to invest in training employees and that they were required to make training and development plans for the following year. They received descriptions of two training programs proposed by the training and development manager and were asked to choose the appropriate program to invest in and allocate their budget accordingly. Participants were also informed that they could defer their decision and search for additional information about other training programs. They then read the descriptions of two training programs—Time Management and Effective Communication. Each program was described along the dimensions of "Purpose," "Benefits," "Format," and "Limitations." A pretest with a separate group of HR managers rated these two programs as similarly attractive (see Web Appendix D for pretest and stimuli details). Upon reading the decision scenario and descriptions of the training programs, participants decided among three options: "Choose the Time Management program," "Choose the Effective Communication program," and "Choose neither program, save the budget, and search for additional information." After selecting one of the options, participants who chose one of the two programs also decided on the percentage of the HR budget they would spend on the chosen training program and the percentage they would like to save.

Upon completing the decision task, participants answered additional questions about the newspaper article survey. In the *election* condition, participants first indicated the extent to which they had evaluated each candidate and their political views in isolation or in comparison to the rival candidate's views on a 7-point scale (1 = In isolation, 7 = In comparison to the rival candidate). In the *control* condition, participants indicated the extent to which they had evaluated the State of Tennessee's economy, education system, and appropriateness for living in isolation or in comparison to another state (1 = In isolation, 7 = In comparison to another state). These measures comprised the manipulation check items.

Further, we measured the following control variable to account for potential alternative explanations. Specifically, we asked participants to respond to measures about the *diagnosticity* of the newspaper article content by answering two questions ($r$ = .63, $p < .001$: "How useful was the newspaper article for answering questions on political candidates/about the State of Tennessee in the survey?" and "How diagnostic was the newspaper article for answering questions on political candidates/about the State of Tennessee in the survey?", from 1 = Not at all to 7 =

Very), their *mood* ("How did you feel after completing the newspaper article survey about political candidates/the State of Tennessee?" from 1 = Bad to 7 = Good), and *fatigue level* ("How mentally tired did you feel after completing the newspaper article survey about political candidates/the State of Tennessee?" from 1 = Not at all to 7 = Very). Finally, participants indicated their years of work experience, position level, and demographics such as age, gender, and ethnicity.

***Results.*** We analyzed the self-reported comparison tendency as a function of manipulated conditions (1 = election, −1 = control) in an analysis of variance (ANOVA). As expected, participants reported a stronger tendency to make comparisons in the election condition ($M_{\text{election}} = 5.11$) than in the control condition ($M_{\text{control}} = 3.71$), $F(1,101) = 13.63$, $p < .001$, partial $\eta^2 = .12$.

We analyzed *spending level* as a function of election manipulation employing an ANOVA using two approaches. First, including all participants and assigning "zero dollars spent" for those participants choosing not to purchase one of the training programs, the analysis revealed a main effect of election, indicating that exposure to comparative political information increased the percentage of budget spent ($M_{\text{election}} = 39.72\%$ vs. $M_{\text{control}} = 21.94\%$, $F(1, 101) = 7.86$; $p = .006$, partial $\eta^2 = .07$). Second, among only those participants who chose one of the training programs ($n = 55$), those in the election condition spent more of their budget ($M_{\text{election}} = 63.09\%$) compared to those in the control condition ($M_{\text{control}} = 51.19\%$), $F(1, 53) = 4.27$, $p = .044$, partial $\eta^2 = .08$). Both sets of results support Hypothesis 1. Tables 5 and 6 contain the correlation matrix and results, respectively.

In supplemental analyses to assess expected differences in the effect of exposure to comparative political information on *choice likelihood*, choice was coded as 1 if participants selected either "Choose the Time Management program" or "Choose the Effective Communication program" and coded as 0 if participants selected "Choose neither program, save the budget, and search for additional information." We then examined choice likelihood as a function of manipulated conditions in a binary logistic regression. Results showed that, relative to the control, the election context significantly increased participants' likelihood of choosing one of the available training programs rather than choosing neither ($M_{\text{election}} = 62.96\%$ vs. $M_{\text{control}} = 42.86\%$; Wald $\chi^2(1) = 4.12$, $p = .043$, odds ratio = 2.27).

Additional analyses revealed that participants perceived that the newspaper article on political elections provided more diagnostic information than did the control article ($M_{\text{election}} = 4.22$ vs. $M_{\text{control}} = 3.70$), $F(1, 101) = 3.91$, $p = .051$, partial $\eta^2 = .04$. Moreover, participants reported higher levels of fatigue after answering questions about political candidates in the election condition compared to answering questions on the state of Tennessee in the control condition ($M_{\text{election}} = 2.98$ vs. $M_{\text{control}} = 2.24$), $F(1, 101) = 5.91$, $p = .017$, partial $\eta^2 = .06$. However, the manipulation of comparative political information did not affect participants' mood ($M_{\text{election}} = 4.50$ vs. $M_{\text{control}} = 4.78$), $F(1, 101) = 1.01$, n.s. To control for the potential role of information diagnosticity and fatigue in affecting choice and spending level decisions, we added these two variables into our spending level and choice models. The positive effect of election on spending ($F(1, 99) = 7.60$, $p = .007$, partial $\eta^2 = .07$) and choice (Wald $\chi^2(1) = 4.43$, $p = .035$, odds ratio = 2.49) remained significant, while the effects of neither information diagnosticity nor fatigue were significant.

**TABLE 5**
**Study 3 Descriptives and Correlation Matrix**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Comparative Political Information | 1 | | | | | |
| 2. Choice Likelihood | 0.20* | 1 | | | | |
| 3. Spending Levels | 0.27** | 0.88** | 1 | | | |
| 4. Article Diagnosticity | 0.19 | 0.06 | 0.09 | 1 | | |
| 5. Fatigue Level | 0.24* | −0.03 | −0.01 | −0.18 | 1 | |
| 6. Mood | −0.10 | 0.07 | 0.15 | 0.55** | −0.31** | 1 |
| *Mean* | 0.05 | 0.53 | 31.26 | 3.98 | 2.63 | 4.63 |
| *SD* | 1.00 | 0.50 | 33.21 | 1.35 | 1.57 | 1.39 |

*Notes:* $n = 103$; Comparative political information: 1 = election, −1 = control.
* $p < 0.05$
** $p < 0.01$

**TABLE 6a**
**Study 3: Key Results**

| | Choice Likelihood | | Spending Levels |
|---|---|---|---|
| | *B* | *Wald* | *F* |
| Comparative Political Information (Hypothesis 1) | 0.82 | 4.12* | 7.86** |

*Notes:* $n = 103$; Comparative political information: 1 = election, −1 = control.
* $p < 0.05$
** $p < 0.01$

***Discussion.*** This study employed an experiment to demonstrate that exposure to comparative political information can influence managers' spending decisions in nonpolitical domains. Ruling out alternative explanations associated with our quasi-experiments, this finding is consistent with Hypothesis 1.

Study 4 also employs an experiment, but with a focus on demonstrating the proposed process mechanism in Hypothesis 2. Specifically, when comparing political candidates activates a comparative mindset, managers would skip the whether-to-buy step and decide which to buy directly, resulting in a reduced role of negative information in decision making. Further, Study 4 also includes conditions that reverse the managerial decision frame to one of rejection (rather than selection), anticipating that such a decision frame will limit the reduction in importance of negative information, and thus attenuate the effect observed thus far (Hypothesis 3).

## Study 4

Study 4 tests Hypothesis 1–3 by exposing participants to comparative or noncomparative political information (as our control). Further, this study incorporates two important design elements. First, we again employ a political election context. However, all of our stimuli are political and vary only on whether they are comparative or noncomparative in nature. This manipulation allows us to conduct a more conservative test of Hypothesis 1. Second, we examine how the decision frame may affect the importance of negative information. We expect that shifting the decision frame from selecting to rejecting options may enhance the importance of negative attributes (Chernev, 2009; Shafir, 1993; Soman, 2004), which should restore the importance of negative information in the decision-making process and thus attenuate the comparative mindset effect induced by exposure to comparative political information.

**TABLE 6b**
**Study 3: Key Results with Control Variables**

| | Choice Likelihood | | Spending Levels |
|---|---|---|---|
| | *B* | *Wald* | *F* |
| Comparative Political Information (Hypothesis 1) | 0.91 | 4.43* | 7.60** |
| Control Variables | | | |
| Article Diagnosticity | −0.004 | 0.001 | 0.05 |
| Fatigue Level | −0.12 | 0.71 | 0.55 |

* $p < 0.05$
** $p < 0.01$

***Method.*** We recruited marketing professionals from both a local chapter of the AMA and a Qualtrics panel to participate in this study in exchange for the chance to win a gift card or for monetary compensation. After 55 participants dropped out of the survey before responding to the dependent task, we were left with an effective sample size of 221. Missing data on variables involved in the analyses were automatically omitted. Average age of the sample was 44.12 years ($SD = 14.09$), work experience was 20.83 years ($SD = 12.86$), and level of highest position obtained was 6.91 ($SD = 2.30$) on a 10-point scale (1 = Entry level to 10 = President or CEO level).

Participants were randomly assigned to one of four conditions comprising a 2 (condition: comparative vs. noncomparative political information) × 2 (decision frame: selection vs. rejection) between-subjects design. Participants first saw stimuli that featured an "Opinion Survey on Political Candidates" and were asked to evaluate candidates who were ostensibly running for positions in the state of Ohio. Half of the participants were randomly assigned to the comparative political information condition, in which they compared three pairs of candidates running for three positions (i.e., state senator, state representative, and secretary of state). For each position, participants read the two candidate's biographies and indicated which candidate they would support, if they were to vote, on an 11-point scale anchored by "Definitely [Name of Candidate A]" and "Definitely [Name of Candidate B]." We randomized the sequence of presentation of each pair of candidates. In the noncomparative political information condition, the biography of one candidate from each pair was randomly selected and participants were informed that this candidate was running for the corresponding position. After reading the candidate's biography, participants

indicated they extent to which they would support the candidate, if they were to vote, using an 11-point scale anchored by "Definitely not support" and "Definitely support." The sequence of presenting the candidate's information for each position was randomized. A separate pretest ensured that this manipulation activated a comparative mindset but did not influence other plausible variables. Web Appendix E contains stimuli and pretest details.

After completing the first survey, in an ostensibly unrelated study, all participants were asked to play the role of a marketing manager of a computer manufacturing company and to make marketing plans for the company for the following year. They were informed that they had a budget to market products and that they could choose the computer model they wanted to market and allocate their budget accordingly. Participants were informed that two computer models were ready to be sold and that two other computer models were under development and could also be introduced the following year. This information was included to ensure that participants understood they had options for marketing new products in the future and they should not to feel compelled to market the current models. They then read descriptions of the two computer models ready to be sold. Each model was described according to two positive, two negative, and two neutral attributes.[3] Based on the product descriptions, participants made choice and spending-level decisions, which served as the dependent variables.

Specifically, upon reading the descriptions of the decision task and the descriptions of two computers, in the selection frame condition, participants decided among three options: "Market Model A," "Market Model B," and "Market neither model and save the budget." In the rejection frame condition, the options were framed as "Reject Model A," "Reject Model B," and "Reject both models and save the budget." After that, participants who decided to market Model A or B in the selection frame condition and those who decided to either reject Model A or reject Model B in the rejection frame condition further decided the percentage of the marketing budget they would like to spend and the percentage they would like to save. Participants who decided to market neither model in the selection frame condition, or those who decided to reject both models in the rejection frame condition, did not make this spending-level decision.

Participants rated the importance of 12 different product features in making their decisions (0 = Not at all important, 10 = Extremely important). We averaged the importance ratings of the four (two per each computer model) positive, negative, and neutral attributes to generate one negative, one positive, and one neutral attribute importance score. The negative attribute importance score was used in subsequent analyses to assess how negativity importance differed as a function of the manipulation of comparative political information and decision frame. In addition, all participants provided information related to their work experience, position level, and demographics such as age, gender, and ethnicity.

***Analyses and results.*** To assess support for Hypothesis 3, we analyzed *spending levels* as a function of the comparative political information manipulation (1 = comparative political information, −1 = noncomparative political information), decision frame manipulation (1 = rejection frame, −1 = selection frame), and their interaction in an ANOVA in two separate tests. We used contrast codes rather than dummy codes for all independent variables because this coding scheme allows us to assess the main effects at the mean level of the second variable (Irwin & McClelland, 2001). In the first test, including all participants and assigning "zero dollars spent" for those choosing not to market one of the computers, results revealed a significant main effect of comparative political information ($F$ (1, 217) = 5.30; $p$ = .022, partial $\eta^2$ = .02), indicating that exposure to comparative political information increased the percentage of budget spent ($M_{\text{comparative}}$ = 21.79% vs. $M_{\text{noncomparative}}$ = 14.98%); and a main effect of decision frame ($F$ (1, 217) = 15.82; $p < .001$, partial $\eta^2$ = .07), indicating that the rejection frame led to lower spending levels versus the selection frame ($M_{\text{selection}}$ = 24.93% vs. $M_{\text{rejection}}$ = 12.43%). Most importantly, the interaction between comparative political information and decision frame was significant ($F$ (1, 217) = 9.61; $p$ = .002, partial $\eta^2$ = .04). Simple effect analyses show that in the selection frame, participants in the comparative political

[3] These positive (+), negative (–), and neutral (0) attributes were selected based on a pretest among a separate sample of managers from the same population. Model A was described as High RAM (Random Access Memory) (+), Installment Payment Available (0), Low Monitor Display Resolution (–), Good Post-Purchase Repair Service (+), Multiple Colors Available (0), and Low CPU (Central Processing Unit) Speed (–). Model B was described as Two-Year Warranty with No Extra Cost (+), Low Hard Disk Capacity (–), Standard Software Package Included (0), Stable Operation (+), Poor Sound Quality (–), and Keyboard with New Design (0).

information condition spent more of their budget ($M_{comparative}$ = 33.15%) relative to those in the noncomparative political information condition ($M_{noncomparative}$ = 16.40%, $F(1, 104) = 11.45$; $p = .001$, partial $\eta^2 = .10$). However, in the rejection frame, the simple effect of exposure to comparative political information on spending levels was insignificant ($M_{comparative}$ = 11.21% vs. $M_{noncomparative}$ = 13.68%, $F$ (1, 113) = .42; n.s.). These findings support Hypothesis 3.

In a second test, in which we analyzed spending levels among only those participants who had decided to market one of the computer models ($n = 96$), the main effect of exposure to comparative political information was not significant ($F$ (1, 92) = 1.10; n.s.), the main effect of decision frame was marginally significant ($F(1, 92) = 3.04$; $p = .085$, partial $\eta^2 = .03$), and the interaction between exposure to comparative political information and decision frame was marginally significant, $F(1, 92) = 3.25$; $p = .075$, partial $\eta^2 = .03$. Subsequent simple effect analyses indicated that in the selection frame condition, those in the comparative political information condition spent more of the budget ($M_{comparative}$ = 49.72%) compared to those in the noncomparative political information condition ($M_{noncomparative}$ = 38.77%), $F$ (1, 56) = 4.90, $p = .031$, partial $\eta^2 = .08$. However, in the rejection frame condition, participants in both conditions committed similar levels of the budget to spending ($M_{comparative}$ = 36.11% vs. $M_{noncomparative}$ = 39.00%), $F$ (1, 36) = .25, n.s.).

We further examined the effect of our manipulations on choice likelihood. In the selection frame condition, choice was coded as 1 if participants chose either "Market Model A" or "Market Model B" and coded as 0 if participants decided to "Market neither model and save the budget." In the rejection frame condition, choice was coded as 1 if participants chose either "Reject Model A" or "Reject Model B," and coded as 0 if participants decided to "Reject both models and save the budget." The correlation matrix and results are presented in Tables 7 and 8, respectively.

We then analyzed *choice likelihood* as a function of comparative political information manipulation, decision frame, and their interaction in a binary logistic regression. Results reveal a significant main effect of decision frame (Wald $\chi^2$ (1) = 10.10, $p = .001$, odds ratio = 0.41), indicating that the rejection frame decreased choice likelihood ($M_{selection}$ = 54.72% vs. $M_{rejection}$ = 33.04%). The main effect of comparative political information was not significant (Wald $\chi^2$ (1) = 2.10, n.s.). More importantly, the comparative political information by decision frame interaction was significant (Wald $\chi^2$ (1) = 4.40, $p = .036$, odds ratio = 0.55). Simple effects analysis showed that when adopting the selection frame, exposure to comparative political information significantly increased the likelihood of choosing to market one of the computer models ($M_{comparative}$ = 66.67% vs. $M_{noncomparative}$ = 42.31%; Wald $\chi^2$ (1) = 6.21, $p = .013$, odds ratio = 2.73). In contrast, when adopting a rejection frame, the simple effect of exposure to comparative political information on choice likelihood was not significant ($M_{comparative}$ = 31.03% vs. $M_{noncomparative}$ = 35.09%; Wald $\chi^2$ (1) = .21, n.s.).

To assess the influence of treatment conditions on negativity importance, we analyzed the negative attribute importance score as a function of comparative political information and decision frame manipulations. Results show a main effect of decision

**TABLE 7**
**Study 4 Descriptives and Correlation Matrix**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Comparative Political Information | 1 | | | | | | |
| 2. Decision Frame | −0.01 | 1 | | | | | |
| 3. Importance of Positive Attributes | 0.02 | −0.03 | 1 | | | | |
| 4. Importance of Negative Attributes | −0.11 | 0.26** | 0.27** | 1 | | | |
| 5. Importance of Neutral Attributes | −0.02 | −0.08 | 0.50** | 0.07 | 1 | | |
| 6. Choice Likelihood | 0.10 | −0.22** | 0.11 | −0.41** | 0.23** | 1 | |
| 7. Spending Levels | 0.14* | −0.26** | 0.05 | −0.44** | 0.18** | 0.86** | 1 |
| *Mean* | 0.01 | 0.04 | 7.12 | 7.67 | 5.22 | 0.43 | 18.43 |
| *SD* | 1.00 | 1.00 | 1.54 | 1.94 | 1.83 | 0.50 | 24.42 |

*Notes:* $n = 221$; Comparative political information: 1 = comparative political information, −1 = noncomparative political information; Decision frame: 1 = rejection, −1 = selection.

* $p < 0.05$

** $p < 0.01$

**TABLE 8a**
**Study 4 Results: Key Results**

| | Choice Likelihood | | Spending Levels | Importance of Negative Attributes |
|---|---|---|---|---|
| | *B* | *Wald* | *F* | *F* |
| **Manipulations** | | | | |
| Comparative Political Information | 0.41 | 2.10 | 5.30* | 3.04 |
| Decision Frame | −0.90 | 10.10** | 15.82** | 15.30** |
| **Interactions** | | | | |
| Comparative Political Information*Decision Frame (Hypothesis 3) | −0.59 | 4.40* | 9.61** | 5.16* |

*Notes:* $n = 221$; Comparative political information: 1 = comparative political information, −1 = noncomparative political information; Decision frame: 1 = rejection, −1 = selection.
* $p < 0.05$
** $p < 0.01$

frame, $F(1, 215) = 15.30$, $p < .001$, partial $\eta^2 = .07$, indicating that participants rated negative attributes to be more important in rejection decisions ($M_{\text{rejection}} = 8.15$) than in selection decisions ($M_{\text{selection}} = 7.16$). The results also revealed a marginally significant main effect of comparative political information, $F(1, 215) = 3.04$, $p = .083$, partial $\eta^2 = .01$. Most importantly, there was an interaction between comparative political information and decision frame, $F(1, 215) = 5.16$, $p = .024$, partial $\eta^2 = .02$. Probing the simple effects, we find that under the selection frame, exposure to comparative political information significantly decreased the importance of negative attributes ($M_{\text{comparative}} = 6.66$ vs. $M_{\text{noncomparative}} = 7.67$), $F(1, 103) = 5.46$, $p = .021$, partial $\eta^2 = .05$ However, this difference disappeared under the rejection frame ($M_{\text{comparative}} = 8.21$ vs. $M_{\text{noncomparative}} = 8.08$), $F(1, 112) = .24$, n.s.

We tested whether a rejection frame reinstalled negativity importance by assessing the indirect interactive effect of the comparative political information and decision frame on spending levels through the mediator of negative attribute importance. We ran a mediated moderation model (Model 8 with 5,000 bootstrap samples) using the PROCESS macro in SPSS (Hayes, 2013). The mediated moderation effect of comparative political information and decision frame on spending levels via importance of negative attributes was significant (95% CI [–5.4030, −.3980]), supporting Hypothesis 3. In particular, under the selection frame, the indirect effect of comparative political information on spending level via importance of negative attributes was significant (95% CI [.4137, 4.6458]), supporting Hypothesis 2. However, under the rejection frame, this indirect effect was insignificant (95% CI [–1.5804, .9043]).

We repeated the above analysis using choice likelihood as the dependent variable and obtained results consistent with those observed for the

**TABLE 8b**
**Study 4 Results after Controlling for the Importance of Negative Attributes**

| | Choice Likelihood | | Spending Levels |
|---|---|---|---|
| | *B* | *Wald* | *F* |
| **Manipulations** | | | |
| Comparative Political Information | 0.34 | 1.23 | 3.33 |
| Decision Frame | −0.61 | 3.96* | 7.20** |
| **Interactions** | | | |
| Comparative Political Information × Decision Frame (Hypothesis 3) | −0.51 | 2.81 | 6.45* |
| **Process Variable** | | | |
| Importance of Negative Attributes | −0.45 | 24.13** | 33.38** |

* $p < 0.05$
** $p < 0.01$

spending level. Specifically, the mediated moderation effect of comparative mindset and decision frame on choice via importance of negative attributes was significant (95% CI [–.5695, −.0325]). Under the selection frame, the indirect effect of comparative political information on choice via the reduced importance of negative attributes was significant (95% CI [.0323, .5012]). However, under the rejection frame, this indirect effect was insignificant (95% CI [–.1604, .1020]).

***Discussion.*** This study is important for two reasons. First, we manipulate exposure to either comparative information or noncomparative information in a political election context. These manipulations controlled for the context across conditions and only varied the comparative nature of the stimuli. Second, we demonstrate that under a selection frame, exposure to comparative political information fosters a comparative mindset that carries over and reduces the importance of negative attributes in subsequent managerial decision tasks, resulting in higher spending levels and choice likelihood. However, imposing a rejection frame does not generate this effect because negative attributes do not decline in importance.

## GENERAL DISCUSSION

### Summary

We obtained quasi-experimental evidence from the field and experimental evidence from the lab to show that political elections activate a comparative mindset that enhances managers' spending levels in an unrelated domain. We first find that exposure to comparative political information during U.S. presidential election years likely induces a comparative mindset, which yields increased marketing spending among managers in companies headquartered in the United States relative to a control group of companies headquartered outside of the United States. In a more controlled quasi-experiment involving a business strategy simulation, we show that managers spend more on advertising and training initiatives during presidential election years. This tendency becomes stronger in the fall, when exposure to comparative political information gets more intense as Election Day approaches.

Laboratory studies provide more evidence on causality and add insights regarding the underlying mechanism. First, by manipulating comparative political information via exposing participants to political stimuli and making a political choice, we confirm that political elections lead to enhanced spending levels as well as choice likelihood in managerial decisions in nonpolitical domains. Second, our findings provide evidence regarding the mediating role of the importance of negative information as underlying the increased spending tendency. Third, we demonstrate a boundary condition for this phenomenon by finding that changing the decision frame to emphasize the rejection, rather than the selection, of options, eliminates the effect.

### Contributions

There are several benefits of multidisciplinary research. Perspectives from one discipline might, while examining phenomena in another discipline, yield novel insights that may not have appeared had the context from the second discipline not provided the fertile ground for the new insight to emerge. In our case, by illuminating an interesting managerial decision-making phenomenon by extending theory from consumer psychology, our research contributes to the literature in several ways.

***Managerial decision biases.*** Our research identifies a novel societal factor—presidential elections and the associated comparative political information—that changes managers' mindsets when they make business decisions in nonpolitical domains. By conducting both quasi-experiments in which presidential elections were observed and lab-experiments in which comparative political information was manipulated, we offer evidence of the role of this societal-level environmental factor on managerial decisions that is both internally and externally valid. Our findings complement literature examining the role of cognitive and motivational factors in generating decision biases in managerial contexts.

We suggest that frequent exposure to high levels of comparative political information about candidates makes the comparison process chronically accessible, resulting in the manifestation of a comparative mindset effect. Systematic understanding of how societal factors shape managers' mindsets and affect their decisions is important for several reasons. First, because societal events such as presidential elections are not usually directly relevant to managers' day-to-day business decisions, it is easy to see how they might fly under the radar of managers' concerns about factors that could potentially bias their decisions. Demonstrating the consequential biases of elections on managerial decision making (across all four studies) is therefore a first step to alert managers to the undesirable influence of these seemingly irrelevant societal factors.

Second, the extant literature on the role of negativity in decision making has largely focused on the impact of negative mood and affect on information processing (Forgas & George, 2001), interpretation (Mittal & Ross, 1998), and managerial performance (Staw & Barsade, 1993). Our perspective suggests that the role of negative information can also change as a function of decision procedure. As such, the decision procedure itself might implicitly shift the focus away from negative information without the agent's motivational systems being implicated.

Third, and relatedly, unlike other drivers of bias (such as racial or ethnic preferences in hiring, anchoring, and so on), which tend to occur within the boundaries of the organization, the source of bias we identify is quite far from the organization or the manager's day-to-day activity. This environmental influence of elections and associated comparative political information is a more subtle and distant influence on managerial decision making. We therefore suggest that researchers examining managerial decision biases contemplate other sources of bias that might exist outside the traditional boundaries of the organization and the individual manager's psychological and demographic profile.

***Comparative mindsets.*** Our work contributes to the literature on comparative mindsets in three ways. First, our paper is the first to offer evidence regarding the underlying process that accounts for the manner in which a comparative mindset affects choice and spending levels. Specifically, we theorize that the comparative mindset leads managers to skip the whether-to-buy stage and focus on the which-to-buy stage, which consequently decreases the importance of negative information in the decision-making process and influences choice and spending outcomes. In a study not reported in the paper (details and full results of this study are available from the first author), we test the assumption that activating a comparative mindset by exposing participants to comparative information would induce managers to skip the whether-to-buy step, leading to subsequent changes in the importance of negative information and decision outcomes. To do so, we manipulate both exposure to comparative information and the presence or absence of the whether-to-buy step. We find that when participants are *not* required to make a whether-to-buy decision after the induction of a comparative mindset, they exhibit inflated choice and spending levels. However, when a whether-to-buy decision is imposed, the comparative mindset effect disappears and the effect is mediated by a change in the importance of negative information, as found in Study 4. These findings, albeit in a setting in which the comparative mindset was induced by a nonpolitical task, assures us that the phenomenon is indeed driven by the underlying theoretical mechanism we propose—skipping the whether-to-buy step leads to a reduction of negativity importance. We think that this insight will be useful to theory development.

Second, previous research has focused exclusively on the impact of the comparative mindset on individual choice decisions (Xu & Wyer, 2007, 2008). We extend the domain of the dependent variable and observe that a comparative mindset also impacts expenditure level in real-world (Studies 1 and 2) and hypothetical (Studies 3 and 4) spending decisions, presumably because the reduction in the importance of negative information likely yields greater expected value associated from the purchase. Clearly, the comparative mindset effect has broader applications than heretofore envisioned.

Third, as described above, we find that adopting a rejection frame reinstalls the importance of negative information in the decision process and attenuates the comparative mindset effect. This study not only provides process evidence regarding the mediating role of negativity information but also demonstrates important boundary conditions for theory.

***Managerial implications.*** The consequences of falling prey to the comparative mindset can be significant for managers. Specifically, if managers buy when they should defer, or spend more than they should, their organizations might suffer. Practitioners can guard against such a tendency by first becoming aware of such potential biases. Once recognized, managers can be taught techniques to correct for this mindset effect, including debiasing approaches such as counterfactual reasoning, feature-based analysis, and accountability (Bolton, 2003).

Our research identifies an intervention that may prevent a comparative mindset from inflating choice likelihood and spending levels—adopting a rejection frame at the which-to-buy step weakens the impact of mindset (Study 4). In addition, as noted above, in an unreported study, we find that forcing managers to revisit the whether-to-buy step also weakens the impact of the comparative mindset. These debiasing strategies can be easily implemented by organizations in their decision processes.

## Limitations and Future Research

While the effect we observe appears to be robust, and there is an evident process underlying it, there

are likely other boundary conditions for the effect beyond the one identified. For instance, decision scrutiny—the extent to which people make cost–benefit tradeoffs—might moderate the comparative mindset effect. At one end of the decision-scrutiny continuum, people may attend to benefits rather than costs, thus enhancing the comparative mindset effect induced by exposure to comparative political information. At the other end of the continuum, people may pay more attention to costs, thus attenuating the effect. Macroeconomic factors (such as an economic boom) and firm-specific factors (such as the prior year's profit performance) may shift attention to these different ends of the continuum. These are topics worthy of further research. We also caution that these effects, while robust, are likely not immune to external shocks. Thus, the temptation to infer that corporate spending will be relatively high in 2020 due to it being a presidential election year should be tempered by two obvious elements in the environment: (a) the relatively low level of comparative political advertising, and (b) the unknown impact of the 2019 Novel Coronavirus (COVID-19) on managerial decision making in light of supply chain disruptions and suppressed consumer demand.

Further, according to prospect theory, risk seeking may be greater in losses than in gains, yielding higher spending when negative information is salient. However, there are nuances to this finding. For instance, risk seeking occurs in losses when breakeven is a possibility, and the tendency reverses when there are multiple outcomes (Monga & Rao, 2006; Thaler & Johnson, 1990). This issue would benefit from further research.

Finally, given the importance of developing debiasing procedures in managerial decision making (see Bukszar & Connolly, 1988; Hinds, 1999; Koriat, 2008; Posavac, Kardes, & Brakus, 2010; Rose & Windschitl, 2008), we hope that future research will consider additional techniques to remove the potentially damaging effects of the comparative mindset.

## CONCLUSION

Presidential elections, as well as other large-scale political elections, are a societal-level environmental factor that induces a comparative mindset, disposing managers to increase spending in nonpolitical, organizational contexts. This mindset effect, driven by changes to the decision process and a consequent reduction in importance of negative information, is a novel phenomenon that has important economic implications for managers and the organizations in which they serve. Debiasing tools that force managers to make rejection decisions about available options mitigate this effect.

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