Does Company Size Shape Product Quality Inferences? Larger Companies Make Better High-Tech Products, but Smaller Companies Make Better Low-Tech Products

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Companies vary on oft-publicized size metrics (number of employees, revenue). Do consumers prefer otherwise-identical products made by larger or smaller companies? The answer hinges on whether consumers perceive the products as low-tech or high-tech. This prediction stems from a novel framework charting two lay theories regarding key resources companies utilize to provide value to consumers: employees and finances. In the “intrinsic motivation lay theory,” consumers believe that employees of larger (vs. smaller) companies are less intrinsically motivated. In the “financial resources lay theory,” consumers believe that larger (vs. smaller) companies have greater capacity to fund R&D. Critically, product type (low-tech vs. high-tech) differentially affects the accessibility of these two lay theories: For low-tech (vs. high-tech) products, the intrinsic motivation lay theory is more accessible, driving quality evaluations and choice in favor of smaller companies. For high-tech (vs. low-tech) products, the financial resources lay theory is more accessible, driving quality evaluations and choice in favor of larger companies. This research advances theory by reconciling conflicting findings regarding product quality inferences from company size metrics, with guidance for marketers to improve quality evaluations and choice shares by strategically supporting or challenging lay theories and shifting perceptions of company size or product type.

*Keywords*: company size, quality evaluations, intrinsic motivation, financial resources, lay theories, low-tech products, high-tech products, inferences

OSF Link to data, syntax, pre-registrations, and materials for all studies: https://osf.io/vtfb2/
Product quality evaluations are a primary determinant of consumers’ purchase decisions (Spiller and Belogolova 2017; Zeithaml 1988). Yet, consumers often struggle to evaluate product quality and instead rely on salient but imperfect cues in the marketplace (Aaker 1991; Gneezy, Gneezy, and Lauga 2014; Hoch and Deighton 1989; Janiszewski and Van Osselaer 2000). One salient cue involves company size metrics (i.e., number of employees and revenue; Ardito and Dangelico 2018; DelVecchio et al. 2013; Hung et al. 2005; Lennon and Harris 2002; Paharia et al. 2011; Sung et al. 2022; Thompson and Arsel 2004; Yang and Aggarwal 2019). Indeed, we scraped website data from a set of randomly selected Fortune 500 companies, and 95% mentioned the company’s size (number of employees and/or revenue; Web Appendix A, Pilot Data A). Companies highlight their size in marketing communications as well as on their websites (Web Appendix B). Unsurprisingly, most consumers are at least sometimes aware of company sizes when making purchase decisions (81%; Web Appendix A, Pilot Data B).

What product quality inferences do consumers draw from company size metrics? To date, there is no clear consensus in the literature (Table 1). A larger size positively predicts quality evaluations in some cases (e.g., Morgan 1993; Trinca, Duizer, and Keller 2022), but at other times, the relationship reverses (e.g., Boscarino 1988; Chaudhuri et al. 2018; Paharia et al. 2014). We investigated the practical relevance of this question by surveying marketing managers. We found that 80% believed it was important to understand how company size influences quality perceptions (Web Appendix A, Pilot Data C), yet 77% failed to intuit the interaction effect that we document between company size and product type (low-tech vs. high-tech) on perceived quality. As one manager put it, “I work in a small IT firm, so knowing how our perceived size influences our customers decision’s [sic] would massively impact our marketing strategies, pricing, and approach to new/potential customers.” Another manager speculated about the
direction of the relationship but did not correctly intuit it: “I think [size] has a positive effect...If this happens to be an incorrect assumption, it would be useful to know so that we could assess our competitive position better.” Few considered that product type (low-tech or high-tech) might determine the direction of the relationship between company size and perceived quality. Instead, most expected a strictly linear relationship (positive or negative).

Given this theoretical and practical impetus, we present a framework to explain why consumers believe that company size is positively related to product quality in some cases and negatively related in others. We propose that the direction of the relationship is influenced by the perceived product type: whether the product seems relatively low-tech or high-tech. Specifically, we propose that product type differentially affects the accessibility of two previously undocumented lay theories regarding two key resources that companies utilize to provide value to consumers: employee resources and financial resources. Increased accessibility of the employee intrinsic motivation lay theory leads to a negative association between company size and product quality, whereas increased accessibility of the financial resources lay theory leads to a positive association.

Our primary theoretical contribution lies in building a novel framework that (1) reconciles conflicting findings (Table 1) regarding product quality inferences from company size metrics and (2) predicts when a larger size will (vs. will not) lead to more favorable evaluations from consumers. Prior research has examined the relationship between market share and quality evaluations (Hellofs and Jacobson 1999) and between company size and warmth versus competence perceptions (Yang and Aggarwal 2019). However, we are the first to triangulate the central role of perceived product type (low-tech vs. high-tech) in quality evaluations based on company size. Our secondary theoretical contribution lies in documenting two novel lay theories
that guide how consumers infer product quality from company size metrics.

This research answers calls for insight into how company size relates to consumers’ product decisions (Web Appendix A, Pilot Data C) and offers guidance for how managers can strategically portray company size and product type to improve the perceived quality of their products and increase their choice share. We first present our theoretical framework, predictions, and empirics before discussing contributions to the research on company size, product quality, and lay theories, as well as key recommendations for marketers.

**THEORETICAL FRAMEWORK**

Lay theories are beliefs about causal relationships that consumers use to understand the world (Kramer et al. 2012; Labbroo and Mukhopadhyay 2009). Lay theories can arise from numerous sources, including biased sampling of past experiences and media exposure (Haws, Reczek, and Sample 2017). At times, consumers may even hold opposing lay theories about the same construct (Deval et al. 2013). Consumers rely on a particular lay theory to make inferences only if the lay theory is activated and accessible (Higgins 1996), and if it seems appropriate and diagnostic (Billéter et al. 2011; Sackett et al. 2010; Zane et al. 2020).

We propose two focal lay theories that consumers hold about company size. These two lay theories are particularly paramount in the face of company size metrics because they are directly embedded in the sources of value that consumers attune to when they consider a company’s size: employee resources and financial resources (e.g., Paharia et al. 2011; Yang and Aggarwal 2019; see also Chi and Gursoy 2009; Dutta, Narasimhan, and Rajiv 1999; Fleming, Coffman, and Harter 2005; Gatignon and Xuereb 1997; Harrison 2020; Iansiti and West 1997;
Loveman 1998). For this reason, we propose that when encountering company size metrics, these lay theories readily come to mind relative to other potential lay theories. Indeed, a pilot with MBA students revealed that (a) most hold both lay theories and (b) most have either used both lay theories when judging product quality or believe others use these lay theories (Web Appendix A Pilot Data D). We detail these lay theories next.

*Lay Theory Regarding Company Size and Employee Resources*

The number of employees is a salient metric of company size (Paharia et al. 2011; Yang and Aggarwal 2019). When consumers think about employees, they spontaneously consider the employees’ *intrinsic motivation* (Heath 1999; Ryan and Deci 2000)—defined as the interest, enjoyment, and meaning employees derive from their work (McAuley, Duncan, and Tammen 1989). Notably, the evaluation of a person’s intrinsic motivation relates to their perceived competence rather than warmth (Deci and Ryan 1985), such that consumers associate employees’ intrinsic motivation with the creation of customer value (Fleming et al. 2005; Harrison 2020; Loveman 1998). Employees who enjoy their work and feel that their work is inherently rewarding (i.e., intrinsically motivated employees) produce products that seem higher-quality (Chi and Gursoy 2009). We thus propose that perceptions of employees’ intrinsic motivation underpin a central lay theory driving product quality evaluations and choice.

An intrinsic motivation lay theory could plausibly go in either direction—do consumers believe that employees at larger or smaller companies are more intrinsically motivated? One might expect employees at larger companies to seem more intrinsically motivated since larger companies may invest more to attract and retain competent employees who enjoy and are interested in their work. Larger companies may also have programs to cultivate employees’ interest in and enjoyment of their work (as well as resources to publicize such programs to
consumers). Indeed, many companies on Fortune’s “100 Best Companies to Work For” list are larger companies (the top company in 2021 was Cisco, with 77,500 employees). Larger companies may also be more innovative (Hurst and Pugsley 2011), and employees may be intrinsically motivated by opportunities for innovation.

However, we propose that consumers believe the opposite—that employees at larger companies are less intrinsically motivated than employees at smaller companies. (Note that we are predicting a lay theory, not the objective state of employees’ intrinsic motivation). This lay theory may arise in part from observed covariation (Fisher 2003), wherein people infer that events that covary are causally related. Larger companies historically have offered higher pay and financial stability (Brown and Medoff 1989; Freeman 1981), which often negatively correlate with perceived intrinsic motivation (Deci et al. 1974). People may infer that employees would relinquish higher pay at a larger company to work at a smaller company only if doing so enabled the employees to pursue their intrinsic interests (e.g., as epitomized by stereotypes of the starving artist; Amabile et al. 1994; Sheldon and Corcoran 2019). Indeed, media reports regularly spotlight people who leave high-paying jobs at larger companies in pursuit of their interests (Baxter-Wright 2018; Johnson 2016; Matar 2013). Potentially as a result, employees at larger companies may be perceived as putting less “love” into their work, particularly for handmade products (Fuchs, Schreier, and Van Osselaer 2015).

Drawing on these literatures, we propose that consumers hold a lay theory that employees at larger companies are less intrinsically motivated than employees at smaller companies. We confirmed this intrinsic motivation lay theory in a pre-registered pre-test (Web Appendix C1; higher values indicate greater perceived intrinsic motivation; $M_{\text{larger}} = 4.05$, $SD = 1.26$; $M_{\text{smaller}} = 4.98$, $SD = 1.05$; $t(197) = 5.66$, $p < .001$, $d = .80$). Note that as with many lay theories, this lay
theory might not actually be true objectively in some contexts. Indeed, in Supplemental Studies 1a–1b, we provided participants with company size metrics and asked them to predict employees’ intrinsic motivation. Participants held the lay theory in the direction we proposed, inferring a negative relationship between company size and intrinsic motivation—but an analysis of secondary data on objective intrinsic motivation (scraped from Indeed.com) revealed employees at larger (vs. smaller) companies were no less intrinsically motivated (Web Appendix D). Thus, while the question of whether a lay theory is objectively true is not the focus of our research, we find some evidence that the employee intrinsic motivation lay theory is not objectively true in at least two contexts (Supplemental Study 1a: 40 Fortune 500 companies from Bhattacharjee et al. 2017; Supplemental Study 1b: 136 restaurant chains).

Finally, we expect perceptions of intrinsic motivation to affect perceptions of product quality because less intrinsically motivated people invest less effort in their work (Ryan and Deci 2000; Woolley and Fishbach 2017), and consumers believe that effort predicts quality (Kruger et al. 2004). Thus, we predict that increased accessibility of the intrinsic motivation lay theory leads consumers to infer that goods produced by larger (vs. smaller) companies are lower quality and decreases choice of products from larger companies.

*Lay Theory Regarding Company Size and Financial Resources*

We propose that consumers also hold a lay theory regarding financial resources, the other salient resource that consumers consider when presented with company size metrics (Paharia et al. 2011; Yang and Aggarwal 2019). Financial resources are critical for creating value for customers, particularly when devoted to funding research and development (R&D; Dutta, et al. 1999; Iansiti and West 1997). Indeed, the quality of many products is positively predicted by the amount invested in R&D (Cooper 1984; Gatignon and Xuereb 1997). We propose that
consumers hold a lay theory that larger (vs. smaller) companies have increased capacity to fund R&D.

As with many lay theories (Haws et al. 2017), this lay theory may be partly grounded in reality (there is often a positive relationship between company size and R&D expenditure, especially among top R&D spenders; Skillicorn 2018). The media often highlights massive R&D investments from larger companies (Cardenal 2016; Stadler, Helfat, and Verona 2021), and consumers may also personally encounter instances (e.g., on websites like Kickstarter) in which smaller companies are desperate for funds for R&D. We confirmed this financial resources lay theory in a pre-registered pre-test (Web Appendix C1; higher values indicate greater perceived capacity to fund costly R&D; $M_{\text{larger}} = 5.64, \ SD = 1.12; M_{\text{smaller}} = 2.88, \ SD = 1.40; t(197) = 15.37, p < .001, d = 2.18$). As detailed in the General Discussion, this lay theory may reflect reality sometimes, but not always.

Finally, we expect perceptions of R&D spending to affect perceptions of product quality because one main goal of R&D spending is to develop quality goods (Francis 1992; Murray 1987). Of course, the success of R&D performance is determined by more than financial resources, but consumers may still believe that large expenditures are an essential and primary determinant of R&D performance. Thus, we predict that increased accessibility of the financial resources lay theory leads consumers to infer that goods produced by larger (vs. smaller) companies are higher quality and increases choice of products from larger companies.

**Product Type (Low-Tech vs. High-Tech) Drives Accessibility of the Two Lay Theories**

Together, we propose that consumers hold two lay theories regarding company size metrics, which drive opposite relationships between size and quality. When consumers hold multiple lay theories about the same construct, a cue that increases the accessibility of one lay
theory increases that lay theory’s influence on preference and choice (Zane et al. 2020). Consumers regularly consider whether products they encounter are low-tech or high-tech (Wood and Hoeffler 2013).¹ We propose that it is the perception of a product as relatively low-tech or high-tech that differentially affects accessibility of the two lay theories and thus determines the direction of the relationship between company size metrics and product quality evaluations. Specifically, when consumers encounter products that they perceive as low-tech (vs. high-tech), the accessibility of the intrinsic motivation lay theory decreases and the accessibility of the financial resources lay theory increases. This rationale is two-fold.

First, high-tech products require technological sophistication, scientific know-how, and rapid innovation fueled by technological advances (Chang and Taylor 2016; Henard and Szymanski 2001; Tellis, Yin, and Niraj 2009), while low-tech products depend less on science and technology and undergo a slower rate of innovation (Lynn, Schnaars, and Skov 1999; Rubera and Kirca 2012). The quality of high-tech (vs. low-tech) products depends more on cutting-edge technology and advanced features (Francis 1992; Murray 1987). As such, a company’s capacity to fund expensive R&D may be a more salient consideration for high-tech products than for low-tech products, increasing accessibility of the financial resources lay theory.

Second, for low-tech products, the relative absence of technological inputs may increase the salience of employee inputs. Many low-tech products are produced by one employee (Fuchs et al. 2015), whereas high-tech products involve more specialization and compartmentalization (Lin 1992; Tippayawong et al. 2010). Thus, employee-related factors may be a more salient consideration for low-tech products than for high-tech products, increasing accessibility of the intrinsic motivation lay theory.

¹ We focus on perceptions of product type (low-tech vs. high-tech) rather than objective classifications because, regardless of accuracy, consumers’ perceptions drive behavior (Glaser and Denhardt 2010; Hoffmann, Post, and Pennings 2015).
Overall, we suggest that when consumers evaluate products that seem low-tech (vs. high-tech), the intrinsic motivation lay theory is more accessible, leading consumers to infer that products created by larger companies are lower quality than similar products from smaller companies and decreasing choice share of low-tech products from larger companies. By contrast, when consumers evaluate products that seem high-tech (vs. low-tech), the financial resources lay theory is more accessible, leading consumers to infer that products created by larger companies are higher quality than similar products from smaller companies and increasing choice of high-tech products from larger companies (see Figure 1).

RESEARCH OVERVIEW

We focused primarily on mid-market, for-profit companies\(^2\) to test our predictions (Studies 2–6). This focus enabled a conservative test of our theorizing as we could alter perceptions of company size via framing while holding objective size constant. However, we first tested for an interaction between company size and product type on quality evaluations in an ecologically valid context, using secondary data on actual company size along with proxies for product type and quality evaluations (Study 1). Then, we experimentally tested the interaction across multiple product categories (Study 2).

We then investigated the proposed lay theories framework underlying this key interaction. We used a moderated mediation approach: evaluating low-tech (vs. high-tech) products increased accessibility of the intrinsic motivation lay theory, while evaluating high-tech (vs. low-tech) products increased accessibility of the financial resources lay theory (Study 3).

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\(^2\) We test our theorizing in the context of for-profit firms (vs. non-profits or for-profit social ventures; Lee, Bolton, and Winterich 2017) using a traditional business model (i.e., not a sharing economy; Costello and Reczek 2020).
Then, we tested a pair of interventions that challenged each lay theory’s diagnosticity (Studies 4a–4b).

Finally, we confirmed that the phenomenon affects not only quality evaluations but also real product choices in incentive-compatible designs (Studies 5–6 and Supplemental Study 4). Importantly, we also replicated the effect while holding the product itself constant; we used a subtle framing manipulation to portray the same low-tech product as relatively high-tech and found a shift in choice share toward the larger company’s product (Study 6). Table 2 summarizes the studies. We report pre-registrations, data, analysis code, and materials on OSF: https://osf.io/vtfb2/ (see Web Appendix E for power analysis details).

**STUDY 1**

Study 1 utilized secondary data to test our prediction that the relationship between company size and perceived quality varies by product type. As a proxy for perceived quality, we scraped the Net Promoter Scores (NPS) for companies on the Fortune 500 list, and we scraped company size metrics (number of employees and revenue) from Fortune.com. We supplemented the secondary data with primary data on consumers’ perceptions of product type at the industry level. We predicted an interaction between company size and industry type (low-tech vs. high-tech), such that a larger size would negatively predict NPS for low-tech industries but would positively predict NPS for high-tech industries.

**Method**

We scraped the NPS of Fortune 500 companies. NPS ranges from -100 to 100 and captures customers’ willingness to recommend a company. We leveraged NPS as a proxy for
perceived quality, as it correlates with perceived quality (Busby et al. 2015; Triemstra, Menting, and van den Berg 2021) and is widely used by marketers to gauge consumers’ quality perceptions (Picoult 2021). NPS data were available for 480 companies on the Fortune 500 list.

To assess company size, we scraped each company’s number of employees (median = 25,000; range: 55 to 2.2M) and revenue (median = $12,239M; range: $5,190M to $485,651M). We used these metrics as consumers often rely on them to determine company size (e.g., Paharia et al. 2014; Yang and Aggarwal 2019), and substantial research assesses company size via these metrics (DelVecchio et al. 2013; Hung et al. 2005; Lennon and Harris 2002; Sung et al. 2022). As pre-registered (aspredicted.org/GEY_ZWK), we standardized each metric and averaged them ($r = .68$). Data on company size and NPS were from 2015, the most recent year that our research team was able to access for free (from Customer Guru).

We supplemented these secondary data with consumers’ perceptions of each company’s industry (low-tech to high-tech). As pre-registered, 240 MTurk workers ($M_{\text{age}} = 41.10$, SD = 13.37; 46.7% female) each evaluated a subset of 20 companies. Participants viewed each company’s name and industry and rated the industry on a 7-point scale from low-tech (1) to high-tech (7). We averaged the ratings for each company to compute a continuous variable of industry type. For example, Pet Smart and Dollar General were perceived as relatively low-tech ($\leq 2$), whereas Boeing and Microsoft were perceived as relatively high-tech ($\geq 6$).

**Results**

A regression of NPS on company size, industry type, and their interaction term revealed a significant interaction ($B = 1.90$, $SE = .52$, $t(476) = 3.67$, $p < .001$). A floodlight analysis (Spiller et al. 2013; Figure 2) supported our prediction that product type drives opposing relationships between company size and quality evaluations. For companies in relatively low-tech industries, a
larger (vs. smaller) size was associated with significantly lower NPS; for companies in relatively high-tech industries, a larger (vs. smaller) size was associated with significantly greater NPS. As a robustness check, we confirmed that these results held in an additional analysis controlling for company age and type (B2C, B2B, or both; see Web Appendix F).

**Discussion**

Study 1 found that the relationship between company size and NPS is influenced by consumers’ perception of the company’s industry (from low-tech to high-tech). Companies in industries that were perceived as relatively low-tech benefited from a smaller size, whereas companies in industries that were perceived as relatively high-tech benefited from a larger size.

We used Fortune 500 companies in Study 1 for two reasons: First, their NPS data (i.e., the quality proxy data) were readily available. Although other factors beyond perceived quality may contribute to NPS, perceptions of quality are a primary driver (Busby et al. 2015; Triemstra et al. 2021). Second, many of these companies are well-known to consumers, and used in research assessing inferences consumers draw from company size metrics (Bhattacharjee et al. 2017). Indeed, although these companies are relatively large, their sizes vary considerably. Overall, Study 1 thus offers two key benefits: (1) It tests our theory in the real world and (2) It examines a wide range of companies across a diversity of industries.

**STUDY 2**

Study 2 provided a causal test of our theorizing. Using a conservative manipulation of company size, we held objective size constant and altered perceived size by providing information about the size of competitors. We predicted an interaction between framed company
size and product type (low-tech vs. high-tech): for low-tech products, we expected consumers to infer that larger (vs. smaller) companies produced lower-quality goods, but for high-tech products, we expected consumers to infer that larger (vs. smaller) companies produced higher-quality goods. We tested this prediction across multiple product categories.

Method

We pre-registered this study (aspredicted.org/TUD_FVD) and recruited 601 MTurk workers \((M_{\text{age}} = 39.43, \text{SD} = 11.94; 45.9\% \text{ female})\). Participants needed to pass an attention check to participate. We randomly assigned participants to a 2 (framed company size: smaller vs. larger; between-subjects) \(\times\) 2 (product type: low-tech vs. high-tech; between-subjects) \(\times\) 4 (product replicate: chair vs. blanket vs. soap vs. meat; within-subjects) mixed model design.

All participants evaluated four different products created by four different companies; product type and framed company size varied by condition. All participants learned that each company’s founders “came from industry, are well resourced, and are favored to succeed in the market”; we included these details to ensure that our manipulation affected perceptions of company size rather than perceptions of the company as an underdog (Paharia et al. 2014). Furthermore, participants read that the products were machine-made, ensuring that participants did not infer that the products were handmade (Fuchs et al. 2015). All participants then evaluated the quality of four different products (product order counterbalanced). Participants in the low-tech condition viewed a standard chair, blanket, soap, and meat product, while participants in the high-tech condition viewed a robotic wheelchair, smart electric blanket, infrared soap dispenser, and artificial plant-based meat product.\(^3\)

\(^3\) In Studies 2–5 and Supplemental Study 4, pre-tests confirmed that each product in the low-tech condition was perceived as low-tech, and each product in the high-tech condition was perceived as high-tech (Web Appendix C2).
All participants learned that each product was produced by a different company with a unique name (stimuli in Web Appendix F), and they viewed company size information for the focal company and two of its competitors. For example, one of the products in the low-tech condition was a chair produced by FurnitureCo. Participants viewed FurnitureCo’s number of employees (101) and revenue ($1.2M) alongside metrics for two other furniture companies of either larger or smaller sizes (adapted from Yang and Aggarwal 2019). In the larger-frame condition, the two competitors had fewer employees and less revenue (competitor 1: five employees and $59,000; competitor 2: four employees and $48,000), making FurnitureCo appear larger by comparison. In the smaller-frame condition, the two competitors had more employees and more revenue (competitor 1: 2,550 employees and $30M; competitor 2: 2,040 employees and $24.4M), making FurnitureCo appear smaller by comparison.

After viewing each product and company information, participants evaluated the product’s quality, for example, “Do you think that FurnitureCo’s wooden chairs are of a lower or higher quality than wooden chairs made by other companies?” (1 = Much lower quality; 7 = Much higher quality) (adapted from; Ahire et al. 1996; Spiller and Belogolova 2017). After participants evaluated all four products, we included a manipulation check question to confirm that the size manipulation was successful (Web Appendix F).

Results

As pre-registered, we averaged each participant’s quality evaluations of the four products into a single index ($\alpha = .89$). As predicted, an ANOVA on the quality evaluation index revealed a significant company size × product type interaction ($F(1, 597) = 41.11, p < .001, \eta_p^2 = .06$; Figure 3). Participants in the low-tech condition evaluated the products as lower quality in the

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4 We replicated the interaction effect using a multi-item quality evaluation scale in Supplemental Study 2, Web Appendix D.
larger (vs. smaller) frame condition ($M_{\text{larger}} = 3.99, SD = 1.21; M_{\text{smaller}} = 4.58, SD = 1.16; F(1, 597) = 20.40, p < .001, \eta_p^2 = .03$), whereas participants in the high-tech condition evaluated the products as higher quality in the larger (vs. smaller) frame condition ($M_{\text{larger}} = 4.85, SD = 1.15; M_{\text{smaller}} = 4.25, SD = 1.05; F(1, 597) = 20.71, p < .001, \eta_p^2 = .03$).

Discussion

Study 2 replicated the interaction observed in Study 1 using a controlled experiment: Consumers inferred that larger (vs. smaller) companies produced lower-quality low-tech products but higher-quality high-tech products. The interaction between company size and product type was significant even though we used a conservative framing manipulation of company size (holding objective size constant) and described the companies to avoid portraying the smaller one as an underdog (Paharia et al. 2014) or as offering handmade products (Fuchs et al. 2015).

STUDY 3

We theorize that the interaction between company size and product type occurs because perceptions of product type prompt differential accessibility of two lay theories—the employee intrinsic motivation lay theory and the financial resources lay theory—that consumers hold about how company size influences core resources that companies use to provide value to consumers. We predict that evaluating a product perceived as low-tech (vs. high-tech) increases accessibility of the intrinsic motivation lay theory, leading consumers to infer that products produced by larger (vs. smaller) companies are lower in quality. Simultaneously, we predict that evaluating a product perceived as high-tech (vs. low-tech) increases accessibility of the financial
resources lay theory, leading consumers to infer that products produced by larger (vs. smaller) companies are higher in quality.

Study 3 tests this process using a moderated mediation model. Since we propose that perceptions of product type influence lay theory accessibility, we treat product type as the independent variable, each lay theory’s accessibility as parallel mediators, and company size as moderating the effect of each lay theory’s accessibility on quality evaluations. By treating company size as the moderator, we can test our prediction that the direction of the relationship between perceived company size and quality evaluations depends on the relative accessibility of the two lay theories, which are triggered by perceived product type.

Method

We pre-registered this study (aspredicted.org/VC9_SSZ) and recruited 604 MTurk workers. After pre-registered exclusions,\(^5\) we had a final sample of 554 (\(M_{\text{age}} = 39.11, \text{SD} = 11.54; 51.7\% \text{ female}\)). We randomly assigned participants to a condition in a 2 (framed company size: smaller vs. larger) \(\times 2\) (product type: low-tech vs. high-tech) between-subjects design.

Participants evaluated the quality of a blanket, which was either a standard blanket in the low-tech condition or a smart blanket (with wireless-activated heating features) in the high-tech condition. As in Study 2, we held the company’s objective size constant and manipulated participants’ perceptions of its size by varying the size of two competitors.

Before evaluating product quality, participants completed two (counterbalanced) items that assessed the accessibility of each lay theory: “As I am making my quality evaluation, I am thinking that larger companies have less intrinsically motivated employees (i.e., the employees don’t love doing their work and do not find it as meaningful), compared to smaller companies.”

\(^5\) We excluded participants who failed an attention check at the end of the study (\(n = 50\)). The exclusion rate did not significantly differ by condition (\(n_{\text{larger high-tech}} = 17; n_{\text{larger low-tech}} = 10; n_{\text{smaller high-tech}} = 10; n_{\text{smaller low-tech}} = 13; p = .434\)).
and “As I am making my quality evaluation, I am thinking that larger companies have more financial resources to use and invest in product research and development, compared to smaller companies” (1 = Not at all thinking about this; 7 = Very much thinking about this). Participants then evaluated the quality of the blanket produced by the focal company, as in Study 2. Lastly, we included an attention check to carry out the pre-registered exclusions.

**Results**

*Quality evaluations.* First, we tested for an interaction between product type and company size on quality evaluations, which revealed the predicted interaction \(F(1, 550) = 33.76, p < .001, \eta^2_p = .06; \) Figure 4). Participants in the low-tech condition evaluated a blanket produced by a larger (vs. smaller) company as lower-quality \(M_{\text{larger}} = 4.29, \text{SD} = 1.24; M_{\text{smaller}} = 4.84, \text{SD} = 1.22; F(1, 550) = 15.01, p < .001, \eta^2_p = .03\), whereas participants in the high-tech condition evaluated a smart blanket produced by a larger (vs. smaller) company as higher-quality \(M_{\text{larger}} = 5.02, \text{SD} = 1.09; M_{\text{smaller}} = 4.39, \text{SD} = 1.24; F(1, 550) = 18.82, p < .001, \eta^2_p = .03\).

There was no main effect of product type \(F(1, 550) = 1.86, p = .173, \eta^2_p < .01\) or company size \(F(1, 550) = .16, p = .688, \eta^2_p < .01\).

*Product type influences lay theory accessibility.* We theorized that increased accessibility of the intrinsic motivation lay theory when evaluating a low-tech (vs. high-tech) product leads consumers to infer that products produced by larger (vs. smaller) companies are lower quality; likewise increased accessibility of the financial resources lay theory when evaluating a high-tech (vs. low-tech) product leads consumers to infer that products produced by larger (vs. smaller) companies are of higher quality. Indeed, the intrinsic motivation lay theory was more accessible in the low-tech (vs. high-tech) condition \(M_{\text{low-tech}} = 4.28, \text{SD} = 1.71; M_{\text{high-tech}} = 3.76, \text{SD} = 1.76;\)

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6 A validation test in Web Appendix C4 confirms that the single-item measures differentially captured each lay theory.
\[ t(552) = 3.54, p < .001, d = .30 \], whereas the financial resources lay theory was more accessible in the high-tech (vs. low-tech) condition \( M_{\text{high-tech}} = 5.47, \text{SD} = 1.51; M_{\text{low-tech}} = 4.87, \text{SD} = 1.79; t(552) = 4.21, p < .001, d = .36 \).

We then tested the proposed mechanism using a moderated mediation analysis on quality evaluations (Hayes PROCESS model 14; 10,000 bootstrap samples, random seed). Since we propose that product type differentially influences the accessibility of the two lay theories, we pre-registered product type as the independent variable (see Figure 1, note 2), accessibility of the two lay theories as parallel mediators, and company size as moderating the relationship between lay theory accessibility and quality evaluations. This analysis yielded significant indices of moderated mediation both via accessibility of the intrinsic motivation lay theory \( (B_{\text{index}} = .26, \text{SE} = .08, 95\% \text{ CI} = [.11, .43]) \) and via accessibility of the financial resources lay theory \( (B_{\text{index}} = .28, \text{SE} = .08, 95\% \text{ CI} = [.13, .44]; \text{see Figure 5}) \).

Discussion

Study 3 conceptually replicates the phenomenon documented in Studies 1-2: consumers use company size metrics as an indicator of product quality, and the direction of the relationship depends on whether consumers perceive the product as low-tech or high-tech. More importantly, Study 3 reveals the underlying mechanism: evaluating a low-tech (vs. high-tech) product increases accessibility of the intrinsic motivation lay theory (leading to a negative relationship between company size and quality), whereas evaluating a high-tech (vs. low-tech) product increases accessibility of the financial resources lay theory (leading to a positive relationship between company size and quality). Supplemental Study 3 (Web Appendix D) provides more insight into the intrinsic motivation lay theory: consumers infer that intrinsically motivated
employees devote more effort to their work, which leads consumers to infer that more intrinsically motivated employees produce higher quality products.

STUDIES 4A AND 4B

Studies 4a and 4b further examine the proposed lay theories framework by challenging the diagnosticity of each lay theory for quality evaluations, thereby reducing consumers’ reliance on it. This approach has been used by prior research on phenomena that are driven by lay theories (Billeter et al. 2011; Zane et al. 2020).

In Study 4a, we focus on low-tech products and the intrinsic motivation lay theory. We reveal to some participants that the larger company employs workers who are highly intrinsically motivated—thereby challenging the diagnosticity of the intrinsic motivation lay theory. We expect these participants to evaluate the company’s low-tech products as higher in quality than participants evaluating a larger company’s low-tech product who do not receive additional information about the employees’ motivation (i.e., the larger-company baseline condition). Similarly, we reveal to some participants that the smaller company’s employees are not intrinsically motivated, and we expect to find worse quality evaluations than in the smaller-company baseline condition.

In Study 4b, we use an analogous approach with high-tech products and the financial resources lay theory. We reveal to some participants that the larger company underspends its competitors on R&D—thereby challenging the diagnosticity of the financial resources lay theory. We expect to find worse quality evaluations than in the larger-company baseline condition, where participants are free to assume that the large company size indicates high R&D
spending. We reveal to other participants that the smaller company outspends its competitors on R&D, and we expect to find better quality evaluations than in the smaller-company baseline condition.

For exploratory purposes, Studies 4a and 4b included a no-size control condition wherein participants viewed the company’s name and product, but no size metrics. We pre-registered this condition and corresponding analyses as exploratory in the pre-registered study (Study 4b). We did not have predictions about comparisons between the size conditions and this condition because, in the absence of company size information, evaluations of product quality likely depend on multiple factors (e.g., specific product, industry, and company name). Most importantly, because company size metrics are frequently salient in the marketplace (Web Appendix A), the primary goal of our research is to investigate the inferences consumers draw from this salient information.

*Study 4a Method*

We recruited 489 MTurk workers ($M_{age} = 40.82$, $SD = 13.25$; 53.8% female). Participants evaluated a low-tech product, and we randomly assigned them to a condition in a 5-cell (smaller-baseline vs. larger-baseline vs. smaller-intervention vs. larger-intervention vs. no-size control condition) between-subjects design.

Participants read about a company named Home Goods that produced standard chairs (low-tech product from Study 2). In all conditions except for the no-size condition, we described Home Goods as having $1.4M in revenue and 63 employees. We used the size manipulation from Studies 2–3 (larger-frame conditions: competitor 1 had two employees and $0.06M; competitor 2 had three employees and $0.04M, making Home Goods seem larger by comparison; smaller-frame conditions: competitor 1 had 1,985 employees and $33.8M;
competitor 2 had 1,323 employees and $49.0M, making Home Goods seem smaller by comparison).

In the two intervention conditions, we provided additional information to challenge the diagnosticity (Zane et al. 2020) of the intrinsic motivation lay theory. We embedded the information in a screenshot of an anonymous employee testimonial, ostensibly from the company website (study stimuli in Web Appendix F; examples of real company websites that inspired this manipulation are in Web Appendix B). In the smaller-intervention condition, the anonymous employee described feeling meaningless and angry at work, reflecting low intrinsic motivation. This manipulation was inspired by research demonstrating that low intrinsic motivation prompts negative emotions (e.g., anger, anxiety; Wang et al. 2008). In the larger-intervention condition, the anonymous employee described feeling meaningful and gratitude at work, reflecting high intrinsic motivation. Thus, both intervention conditions revealed information that challenged the diagnosticity of the lay theory that employees at larger (smaller) companies have lower (higher) intrinsic motivation. (Notably, this intervention did not alter perceptions of the company’s trustworthiness; Web Appendix C5). In the no-size and baseline conditions, participants did not view employee testimonials.

We measured product quality evaluations as in Studies 2–3. As an attention check, participants identified which company they evaluated (97.5% answered correctly).7

Study 4a Results

Study 4a was not pre-registered; we followed Study 4b’s pre-registration plan for the analysis as the studies had analogous designs. An ANOVA on quality evaluations revealed a significant effect of condition \( F(4, 484) = 31.61, p < .001, \eta_p^2 = .21 \); Figure 6). First, in the two

7 Because this study was not pre-registered, we did not exclude participants based on this attention check. However, we found the same pattern and significance of results when excluding those who did not pass this attention check.
baseline conditions (in which participants could rely on the intrinsic motivation lay theory), we conceptually replicated the low-tech conditions of Studies 2-3: participants evaluated the low-tech product as lower quality in the larger (vs. smaller) baseline condition ($M_{\text{larger}} = 4.05$, $SD = 1.42$; $M_{\text{smaller}} = 4.77$, $SD = 1.05$; $t(484) = 4.35$, $p < .001$, $d = .58$).

Second, to examine the effect of the intervention challenging the diagnosticity of the intrinsic motivation lay theory, we compared the intervention and baseline conditions for the same company size. As predicted, among participants who learned about a comparatively small company, those who learned that the company’s employees had low intrinsic motivation (smaller-intervention condition) evaluated the product as lower quality ($M = 3.14$, $SD = 1.26$) than participants in the smaller-baseline condition, who could rely on the lay theory regarding the high intrinsic motivation of small companies’ employees ($t(484) = 9.73$, $p < .001$, $d = 1.41$). By contrast, among participants who learned about a comparatively large company, those who learned that the company’s employees had high intrinsic motivation (larger-intervention condition) evaluated the product as higher quality ($M = 4.69$, $SD = 1.17$) than participants in the larger-baseline condition, who could rely on the lay theory regarding the low intrinsic motivation of large companies’ employees ($t(484) = 3.87$, $p < .001$, $d = .49$).\(^8\)

Lastly, in exploratory analyses, we found that quality evaluations in the no-size control condition were higher ($M = 4.44$, $SD = .86$) than in the smaller-intervention condition ($t = 7.74$, $p < .001$) and the larger-baseline condition ($t = 2.34$, $p = .020$), were no different from in the larger-intervention condition ($t = 1.52$, $p = .130$), and were lower than in the smaller-baseline

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\(^8\) To provide clearer managerial implications for larger companies in low-tech product domains, we conducted an exploratory comparison of the smaller-baseline condition and the larger-intervention condition. We found no significant difference in quality evaluations ($t(484) = .49$, $p = .622$). Thus, alerting consumers that employees are highly intrinsically motivated seems sufficient to close the gap in perceived quality between larger and smaller companies in low-tech product domains.
condition ($t = 2.00, p = .046$). As noted, in the absence of company size information, consumers likely use multiple factors (e.g., product and company name) to evaluate product quality.

*Study 4a Discussion*

By challenging the diagnosticity of the intrinsic motivation lay theory for some participants, Study 4a affirmed the role of the lay theory in the negative relationship between company size and quality inferences for low-tech products. The findings also offer practical insight for managers of larger firms that produce low-tech products: Alerting consumers that employees are highly intrinsically motivated seems sufficient to close the gap in the perceived quality of low-tech products that otherwise separates larger and smaller companies.

*Study 4b Method*

We pre-registered this study ([aspredicted.org/HMM_WXL](https://aspredicted.org/HMM_WXL)) and recruited 512 MTurk workers ($M_{age} = 42.53$, $SD = 13.38$; 48.2\% female). We randomly assigned participants to a condition in a 5-cell (smaller-baseline vs. larger-baseline vs. smaller-intervention vs. larger-intervention vs. no-size control) between-subjects design.

Participants read about a company named TechnologyChair that produced robotic wheelchairs (high-tech product from Study 2). In all conditions except for the no-size condition, we described TechnologyChair as having $1.4M$ in revenue and 63 employees. We manipulated the company size frame in all conditions except the no-size control condition using the same company size information as in Study 4a. In the two intervention conditions, participants encountered information that directly opposed the financial resources lay theory. The information was embedded in the headline of a Forbes article (stimuli in Web Appendix F), which reported that TechnologyChair either was spending more on R&D than competitors (in the smaller-intervention condition) or was spending less on R&D than competitors (in the larger-
intervention condition). Participants in the no-size control condition did not view information about company size or capacity to fund R&D; participants in the baseline conditions did not view information about R&D.

We measured product quality evaluations as in Studies 2–4a. Participants completed the same attention check as in Study 4a, and a majority (84.2%) answered correctly.  

*Study 4b Results*

As pre-registered, an ANOVA on quality evaluations revealed a significant effect of condition ($F(4, 507) = 10.53, p < .001, \eta_p^2 = .08$; Figure 7). First, in the two baseline conditions (in which participants could rely on the financial resources lay theory), we conceptually replicated the high-tech conditions of Studies 2-3: participants evaluated the high-tech product as higher in quality in the larger (vs. smaller) baseline condition ($M_{\text{larger}} = 5.07, \text{SD} = 1.09; M_{\text{smaller}} = 4.18, \text{SD} = 1.27; t(507) = 5.11, p < .001, d = .75$).

Second, we examined the effect of challenging the diagnosticity of the financial resources lay theory. As predicted, for participants in the smaller-frame conditions, those who learned that the company was outspending competitors on R&D (smaller-intervention condition) evaluated the product as higher quality ($M = 4.58, \text{SD} = 1.33$) than participants in the smaller-baseline condition, who could rely on the lay theory regarding low R&D spending for smaller companies ($t(507) = 2.24, p = .026, d = .31$). By contrast, for participants in the larger-frame conditions, those who learned that the company was spending less than competitors on R&D (larger-intervention condition) evaluated the product as lower quality ($M = 4.11, \text{SD} = 1.47$) than participants in the larger-baseline condition, who could rely on the lay theory regarding high R&D spending for larger companies ($t(507) = 5.51, p < .001, d = .74$).

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9 We did not pre-register the attention check as an exclusion criterion, so we conducted analyses on all participants. We found the same pattern and significance of results when excluding those who did not pass this attention check.
Lastly, in exploratory analyses, we found that quality evaluations in the no-size control condition were lower \((M = 4.22, \text{SD} = 1.11)\) than in the smaller-intervention condition \((t = 1.99, p = .047)\) and the larger-baseline condition \((t = 4.81, p < .001)\) but did not differ from the larger-intervention condition \((t = .64, p = .526)\) or the smaller-baseline condition \((t = .21, p = .836)\). As noted in Study 4a, in the absence of company size information, consumers likely use multiple factors to evaluate product quality. We focus on company size metrics because they are pervasive in the marketplace and salient to consumers (Web Appendix A).

*Study 4b Discussion*

By challenging the applicability of the financial resources lay theory for some participants (Zane et al. 2020), Study 4b affirmed the role of the lay theory in the positive relationship between company size and quality inferences for high-tech products. Together, Studies 4a and 4b corroborate the moderated mediation analysis in Study 3 and provide robust support for the proposed lay theories framework. Additionally, the results have managerial implications for firms with a disadvantageous pairing of company size and product type: Managers of larger firms that produce low-tech goods can showcase their employees’ high intrinsic motivation, as Study 4a finds that doing so improves quality evaluations (relative to baseline evaluations of the same company and product). Similarly, managers of smaller firms that produce high-tech goods can emphasize their heavy spending on R&D, as in Study 4b.

*STUDY 5*

Study 5 examined the consequences of our framework for incentive-compatible choices. We predicted that consumers who faced a choice between two low-tech products would favor the
option created by the smaller (vs. larger) company, whereas consumers who faced a choice between two high-tech products would favor the option created by the larger (vs. smaller) company. We gave participants company size information for the two products via screenshots of “About Us” pages, wherein companies highlight their size (Web Appendix B). Also, like Study 3, Study 5 measured the accessibility of the two lay theories. We predicted that the effect of product type (low-tech vs. high-tech) on choice between the smaller company’s product and the larger company’s product would be mediated by the differential accessibility of the two lay theories.

Method

We pre-registered this study (aspredicted.org/PEE_FAG) and recruited 203 MTurk workers. After pre-registered exclusions, our final sample size was 191 \( (M_{age} = 42.02, \ SD = 13.81; \ 50.3\% \ female) \). We randomly assigned participants to a condition in a 2 (product type: low-tech vs. high-tech) between-subjects design.

All participants learned that they would be choosing between two coffee makers from different companies, Coffee Now and Coffee Co.; based on randomly-assigned condition, the products were either drip coffee makers (pre-tested as low-tech) or smart coffee makers (pre-tested as high-tech; Web Appendix C2). Participants learned that they should choose the product they actually wanted as they would be entered into a lottery to win their chosen product. Before choosing, participants viewed screenshots, ostensibly from each company’s “About Us” webpage (stimuli in Web Appendix F). The screenshots revealed that one company had 9,000 employees and $3.5 billion in revenue, while the other had 25 employees and $8M in revenue (company names counterbalanced). Participants learned that both companies were in London, so
our American participants would not infer that the smaller company was local (Gao, Zhang, and Mittal 2017).

Participants chose the company from which they wanted to receive the coffee maker. Lastly, participants completed the two items from Study 3 regarding the accessibility of each lay theory when making their choice (our parallel mediator measures). After the study concluded, we selected one participant to receive a bonus credited to their account to make their coffee maker purchase.

Results

More participants chose the coffee maker created by the smaller company in the low-tech condition (67.4%) than in the high-tech condition (34.3%; χ²(1, N = 191) = 20.83, p < .001, φ = .33). Binomial tests revealed that within the low-tech condition, more participants chose the coffee maker created by the smaller company than the coffee maker created by the larger company (z = 3.23, p = .001), whereas within the high-tech condition, more participants chose the coffee maker created by the larger company than the coffee maker created by the smaller company (z = 3.02, p = .003).

Further analysis revealed that when participants made their choice, the intrinsic motivation lay theory was more accessible in the low-tech (vs. high-tech) condition (M_{low-tech} = 3.76, SD = 2.05; M_{high-tech} = 3.12, SD = 2.01; t(189) = 2.18, p = .031, d = .32), whereas the financial resources lay theory was more accessible in the high-tech (vs. low-tech) condition (M_{high-tech} = 5.38, SD = 1.78; M_{low-tech} = 4.17, SD = 2.05; t(189) = 4.37, p < .001, d = .63). A parallel mediation analysis (Hayes PROCESS model 4; 10,000 bootstrap samples, random seed) revealed that the differential accessibility of the two lay theories mediated the effect of product

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10 A validation test in Web Appendix C4 confirms that the single-item measures differentially captured each lay theory.
type (low-tech vs. high-tech) on choice between the products of the larger and smaller companies (Figure 8). Specifically, greater accessibility of the intrinsic motivation lay theory in the low-tech (vs. high-tech) condition predicted lower choice share of the larger company’s product ($B_{\text{indirect}} = .54, SE = .29, 95\% CI = [.05, 1.18]$). At the same time, greater accessibility of the financial resources lay theory in the high-tech (vs. low-tech) condition predicted greater choice share of the larger company’s product ($B_{\text{indirect}} = .82, SE = .27, 95\% CI = [.41, 1.44]$).

**Discussion**

Study 5 demonstrates that the current phenomenon extends from quality evaluations to product choices: Consumers choosing a low-tech product favored the smaller company, whereas consumers choosing a high-tech product favored the larger company. In Supplemental Study 4 (Web Appendix D), we replicated the results in a different product domain (wallets) and with company size metrics embedded on a different platform (Facebook posts): The choice share of the smaller company’s wallet was larger in the low-tech condition (68.5%) than in the high-tech condition (38.5%; $\chi^2(1, N = 164) = 14.63, p < .001, \phi = .30$).

Study 5 also conceptually replicated the parallel mediation effect we initially demonstrated in Study 3: product type (low-tech vs. high-tech) differentially affected accessibility of the intrinsic motivation lay theory and the financial resources lay theory, thereby affecting consumers’ choice between products from a larger company and a smaller company.

**STUDY 6**

Consumers’ product perceptions lie on a continuum from lower-tech to higher-tech (e.g., Qahmash 2018; see also Study 1’s operationalization of industry type). In Studies 2–5, we
manipulated the product itself to achieve a clear contrast between product types (e.g., low-tech standard blankets vs. high-tech smart electric blankets; see Web Appendix C2 for pre-tests). In Study 6, we provide a more conservative test of our framework by holding the product itself constant and subtly manipulating perceptions of the product’s position on this continuum.

We chose a relatively low-tech product: a wooden pen. In a pre-test of 102 participants, we confirmed that the product itself was perceived as low-tech relative to the scale midpoint ($M = 5.49$, $SD = 1.25$, $t(46) = 8.18$, $p < .001$; scale from 1 = high-tech to 7 = low-tech). In the high-tech framing condition, we enriched the pen’s description with high-tech words and phrases, shifting pre-test participants’ perception of the wooden pen away from being a low-tech product to relatively neutral ($M = 3.71$, $SD = 2.15$, $t(54) = 1.00$, $p = .320$, compared with the midpoint). Despite the subtlety of the change in perceptions caused by the framing manipulation, we expected this high-tech framing to significantly increase the choice share of the larger company’s product.11 We tested this prediction in an incentive-compatible lab study in which all participants received a wooden pen as a function of their choice.

**Method**

We pre-registered this lab study (aspredicted.org/GCJ_NDX) and recruited 208 students ($M_{age} = 21.33$, $SD = 4.25$; 58.2% female) to participate for $5 and a free gift. We randomly assigned participants to a condition in a 2 (product framing: low-tech vs. high-tech) between-subjects design. Participants made a choice between two wooden pens produced by different companies; they were told to choose the option they actually wanted as they would receive their chosen pen at the end of the study. All participants saw the same wooden pen with the same

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11 Since the subtle high-tech framing manipulation made the wooden pen seem neutral rather than high-tech, we reasoned that the manipulation would increase the large company’s choice share but likely would not enable the large company to capture the majority of the choice share.
bullet point descriptors: “made of wood,” “customizable wording on surface,” “laser carved,” and “multiple size options.” To manipulate the framing, we varied the order in which these descriptors were presented and the text beneath these descriptors (stimuli in Web Appendix F). For example, participants in the low-tech (vs. high-tech) framing condition read, “A lot of (highly technologically-advanced laser-oriented) care and consideration is required for a wooden (vs. laser-built) pen to function… it requires conscientious attention to (cutting-edge nanotechnological) detail to make.” See Web Appendix F for the stimuli.

All participants learned that two companies, HomeStore and HomeCo, produce these pens. They viewed screenshots of Facebook posts, ostensibly from the two companies, that contained size information: 600 employees and $17.1M in revenue versus 21 employees and $0.6M in revenue (company names counterbalanced). Participants learned that both companies were located in Switzerland (ensuring that the manipulation did not alter our American participants’ perceptions of whether the companies were local; Gao, Zhang, and Mittal 2017). Finally, participants indicated which company they wished to receive the pen from, and they actually received a wooden pen at the end of the study.

Results

As predicted, more participants chose the wooden pen from the smaller company in the low-tech (64.7%) versus high-tech framing condition (46.2%; \( \chi^2(1, N = 208) = 7.18, p = .007, \varphi = .19 \)). A logistic regression predicting choice from condition, controlling for counterbalanced company name, was also significant (\( B = -.77, SE = .29, \text{Wald} = 7.19, p = .007, \text{OR} = .47 \)).

Discussion

Study 6 replicated the effect with a subtle framing manipulation shifting perceptions of product type and in an incentive-compatible design: Fewer consumers chose the wooden pen
from the smaller company when we framed the pen as relatively high-tech (vs. low-tech). By holding the product itself constant, Study 6 confirms that our effect involves consumers’ perceptions of the product as relatively low or high tech rather than some other difference between product types. Additionally, our framing manipulation has practical implications: larger companies that make relatively low-tech products can grow their choice share by emphasizing higher-tech aspects of their products.

**GENERAL DISCUSSION**

Company size metrics pervade the marketplace, and many consumers are aware of company sizes when making purchase decisions (Yang and Aggarwal 2019; Web Appendix A). Our framework uncovers why consumers, when evaluating product quality or making product choices, favor larger companies in some cases and favor smaller companies in others. Across a secondary data analysis (Study 1), controlled framing studies (Studies 2–4b and 6), and incentive-compatible choices (Studies 5–6), we show that whether consumers favor the larger or smaller company depends on perceived product type: For low-tech products, a smaller company size leads to more favorable outcomes (better quality evaluations; larger choice shares). For high-tech products, a larger company size leads to more favorable outcomes.

We propose a novel lay theories framework to explain why perceived product type determines the direction of the relationship between company size and quality evaluations. The lay theories pertain to two key resources, employees and financial resources, that companies utilize to provide value to consumers. In the *intrinsic motivation lay theory*, consumers believe that the employees of larger (vs. smaller) companies are less intrinsically motivated; evaluation
of low-tech (vs. high-tech) products increases accessibility of this lay theory, which predicts lower product quality evaluations and choice share for larger companies. In the financial resources lay theory, consumers believe that larger (vs. smaller) companies have greater capacity to fund R&D; evaluation of high-tech (vs. low-tech) products increases accessibility of this lay theory, which predicts higher product quality evaluations and choice share for larger companies. Thus, perceived product type determines whether a larger or smaller company will receive better quality evaluations (Study 3) and larger choice share (Studies 5–6). Finally, product quality inferences based on company size metrics change significantly when consumers encounter information that challenges the diagnosticity of the most applicable lay theory (Studies 4a-4b).

**Theoretical Contributions**

Our findings offer several key theoretical contributions to prior research. First, our framework helps reconcile conflicting findings regarding the relationship between company size and quality evaluations. A review of the literature (Table 1) and a pre-test of the domains examined (Web Appendix Table WC2) reveal that prior investigations that found a positive relationship between company size and quality were conducted in relatively high-tech domains (e.g., hospitals, cars, medical devices, and airlines; Boscarino 1988; Chaudhuri et al. 2018; Paharia et al. 2014). By contrast, investigations that found the opposite result were conducted in relatively low-tech domains (e.g., food services; Morgan 1993; Trinca, Duizer, and Keller 2022). Our conceptual model and empirics offer one explanation for why a larger company size leads to more favorable evaluations for high-tech products but less favorable evaluations for low-tech products.

Second, we introduce two novel lay theories and delineate how they guide consumers’ inferences of product quality from company size metrics. Of note, we do not propose that our
framework will reconcile every finding in this literature. We simply contribute one overarching way of integrating and reconciling many past findings and of generating new predictions regarding when a larger company size will (vs. will not) be beneficial.

In doing so, we advance the literature on factors that affect product quality evaluations. In Web Appendix G, Table WG1, we show that prior research has explored how consumers respond to production and product composition information (e.g., Fuchs et al. 2015; Newman and Dhar 2014; Reich et al. 2018) as well as information about the marketing mix (e.g., product price and advertising; Erdem et al. 2008; Kirmani and Wright 1989; Moorthy and Hawkins 2005). Notably, what is missing from this literature is an understanding of how perceptions of product development affect quality evaluations. Indeed, other work examining perceptions of product development examined features that do not alter product quality evaluations (e.g., creative control affects authenticity and recognition, but not quality; Valsesia, Nunes, and Ordanini 2016). Our financial resources lay theory fills this gap by charting the perceived relationship between a company’s size and its financial capacity to fund product development. We find that the lay theory affects quality perceptions and product choices in high-tech domains, with managerial implications that we discuss in the next section.

Finally, our findings relate to other lay theories consumers hold about firm resources, such as lay theories about efficient markets, which can be compensatory (Chernev and Carpenter 2001). We also document compensatory inferences: A larger firm is perceived as having many financial resources to fund R&D (i.e., a strength) but less-intrinsically-motivated employees (i.e., a weakness). Whereas prior research found compensatory inferences involving products of the same price and quality, we examine the consequences of differential lay theory accessibility for quality evaluations and choices. Our theoretical framework is rooted in two novel lay theories,
and we identify perceived product type (low-tech vs. high-tech) as a determinant of the relative accessibility of the two lay theories for quality evaluations and choices.

Managerial Implications

Our findings provide important insight for marketing managers, many of whom recognize the importance of understanding how company size metrics influence consumer behavior and yet do not intuit our findings (Web Appendix, Pilot Data C). An inaccurate understanding may lead to a suboptimal strategy: many larger low-tech companies and smaller high-tech companies provide company size metrics on their websites and in their social media posts (see examples in Web Appendix B). Our research suggests that this strategy can harm these companies’ product quality evaluations.

Our results suggest several strategies for companies that are disadvantaged by a mismatch between product type and company size. Large companies that make low-tech products may benefit from framing their company as smaller than competitors (e.g., Studies 2–4a), highlighting the intrinsic motivation of the employees who make the products (e.g., featuring testimonials from employees who love the work on the company website; Study 4a), or framing aspects of the overall low-tech product category or industry as more high-tech (e.g., emphasizing the precision of the production technology; Study 6). Meanwhile, small companies that make high-tech products may benefit from framing their company as larger than competitors (Studies 2, 3, and 4b), highlighting their “high” R&D spending (Study 4b), or framing the overall high-tech product category or industry as relatively low-tech (not tested, but analogous to Study 6).

Of course, managers need to be realistic about the extent to which they can shift perceptions. A smaller company likely cannot claim (credibly) that its R&D spending matches that of a behemoth like Amazon, but such a company may be able to frame itself and/or its
spending as large relative to other smaller competitors. Alternatively, as exemplified in real communications (Web Appendix, Figures WB12–WB14), a small company can frame R&D expenditures as large relative to self-defined metrics (e.g., their “budget”) or can simply leverage adjectives that cast its R&D expenditure as large.

*The Accuracy of Consumer Lay Theories*

Our framework uncovers two lay theories consumers hold about company size metrics. Lay theories are not always accurate reflections of reality (Haws et al. 2017), so it is interesting to consider the accuracy of the lay theories, as previewed in the introduction.

Supplemental Studies 1a and 1b explored the accuracy of the intrinsic motivation lay theory (Web Appendix D). We scraped secondary data from Indeed.com, where employees rate their happiness and sense of purpose at their company (which we used to construct a measure of objective intrinsic motivation). We also collected publicly available data on company size (number of employees and revenue). Then, we provided the company size metrics to online participants and measured their perceptions of employees’ intrinsic motivation. Consistent with our main studies and our survey of MBA students (Web Appendix, Pilot Data D), participants held the lay theory that employees at larger (vs. smaller) companies are less intrinsically motivated. However, across two datasets of objective intrinsic motivation, we found that this lay theory is not objectively true (Supplemental Study 1a: 40 Fortune 500 companies from Bhattacharjee et al. 2017; Supplemental Study 1b: 136 restaurant chains).

We did not collect data regarding the financial resources lay theory because company size and R&D expenditure are generally positively correlated, especially among top R&D spenders (Skillicorn 2018). However, it is worth noting that larger companies may not always have greater capacity to fund costly R&D (e.g., if they have extensive debt, contract obligations,
or a reluctance to deviate from products that fueled their prior growth). Moreover, companies with smaller current revenues can obtain substantial future funding for expensive R&D initiatives, such as through venture capital (Klette and Griliches 2000).

**Future Directions**

The current research focused primarily on evaluations of product quality for mid-market, for-profit companies (Studies 2-4b; cf. Study 1). This enabled conservative tests of our theorizing as we could hold the company’s objective size constant and alter perceptions of size. Future research can examine whether these findings extend to non-profits, for-profit social ventures (Lee et al. 2017), peer-to-peer platforms (Costello and Reczek 2020), and service settings. In particular, our theoretical framework predicts (and Study 1 suggests) that our findings would apply to service offerings.

It would also be fruitful to explore how company size relates to other perceptions, including perceptions of employees’ extrinsic motivation. On the one hand, intrinsic and extrinsic motivation are at times correlated (Rockmann and Ballinger 2017; Woolley and Fishbach 2018), so perhaps perceptions of extrinsic motivation mirror those of intrinsic motivation. On the other hand, consumers may perceive that larger firms have greater financial capacity not only to fund expensive R&D but also to pay employees larger salaries, which may lead to diverging perceptions of extrinsic motivation (increased by larger salaries) and intrinsic motivation (decreased). We encourage future research to test these possibilities.

Future research could also test other processes underlying the current phenomenon or other lay theories regarding company size. The lay theories that we investigate are particularly relevant to the current phenomenon because they link the company’s size with its resources (employees and finances) for providing value to consumers. However, our documented effects,
like many psychological phenomena, may be multiply determined (Kirmani 2015; Pham 2013). Our empirics shed light on the underlying role of the proposed lay theories framework by controlling for potential alternatives, including whether the company is local (Gao et al. 2017), is an underdog (Paharia et al. 2014), offers handmade products (Fuchs et al. 2015), employs warm and competent employees (Supplemental Study 4; Yang and Aggarwal 2019), and has a larger market share (Supplemental Study 4; Hellofs and Jacobson 1999). We encourage future research to explore additional processes.

A company’s number of employees and the size of its revenue are highly correlated, so most of our manipulations of company size combined these metrics, in line with prior research (e.g., Ardito and Dangelico 2018; DelVecchio et al. 2013; Hung et al. 2005; Lennon and Harris 2002; Sung et al. 2022; Yang and Aggarwal 2019). Supplemental Study 1b provides initial evidence that viewing revenue alone may be sufficient to prompt an effect on quality evaluations via the intrinsic motivation lay theory, and we encourage future research to examine the current phenomenon with individual company size metrics. In rare situations in which these metrics are not highly correlated, we also encourage future research to explore moderators that determine which metric is more influential in evaluations of company size and product quality. Future research also may test other dimensions that reflect company size (e.g., number of branches/stores, operating scope).

12 Because intrinsic motivation is more closely related to competence than warmth (McAuley and Tammen 1989; Ryan and Deci 2000), our predictions are distinct from Yang and Aggarwal (2019)’s work on warmth versus competence. This is reinforced by Yang and Aggarwal (2019)’s findings that consumers perceive small and large companies as equally competent (Studies 2a-b), and their theorizing that consumers prefer to patronize more competent companies even if they are less warm (p. 1372).

13 Because market share is distinct from company size (Web Appendix H, Table WH1), our findings persist when controlling for market share (Supplemental Study 4). Also, because market share and company size are distinct, and because our conceptual framework charts the consequences of two previously undocumented lay theories, our research makes novel predictions regarding the central role of perceived product type (low-tech vs. high-tech) in quality evaluations.
Lastly, we hope future research will examine additional moderators that may differentially affect the accessibility of our two lay theories. For example, when high-tech products are mass-produced, people may be less likely to apply the financial resources lay theory as mass produced products are farther away from the R&D phase. Conversely, product safety concerns might increase the accessibility of the financial resources lay theory, to the extent that financial resources to fund R&D could enable safer products.

**Conclusion**

We contribute a novel framework charting when and why consumers prefer products from larger versus smaller companies. Importantly, this framework reconciles conflicting extant findings regarding how company size affects quality evaluations. It does so by identifying two previously undocumented lay theories that consumers hold about company size and by documenting how perceived product type (low-tech vs. high-tech) differentially activates the lay theories, thereby determining the direction of the relationship between company size and quality evaluations. The results have actionable insights for large low-tech companies and small high-tech companies, which otherwise may be disadvantaged in product quality evaluations.

**REFERENCES**


Triemstra, Mattanja, Juliane Menting, and Bellis van den Berg (2021), “Quality Evaluation Questionnaires - Nursing Homes (QEQ-NH); Validation of Questionnaires for Measuring Quality of Care in Nursing Homes from Various Perspectives,” *BMC Health Services Research*, 21 (1), 961.


## TABLE 1:
EXAMPLES OF FINDINGS FROM THE LITERATURE EXAMINING THE RELATIONSHIP BETWEEN COMPANY SIZE AND QUALITY EVALUATIONS

<table>
<thead>
<tr>
<th>Authors</th>
<th>Perceived Product Type</th>
<th>Smaller Company Size Predicts Higher Quality Evaluations</th>
<th>Larger Company Size Predicts Higher Quality Evaluations</th>
<th>No Relationship Between Company Size and Quality Evaluations</th>
<th>Main Effect and Mechanism Underlying Quality Evaluations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(This article)</strong></td>
<td>Low-Tech vs. High-Tech (manipulated, see Web Appendix Table WC1)</td>
<td>✓</td>
<td>✓</td>
<td>Perceived product type (low-tech vs. high-tech) differentially affects the accessibility of two lay theories regarding employees’ intrinsic motivation (predicts a negative relationship between company size and product quality) and financial resources for funding R&amp;D (predicts a positive relationship).</td>
<td></td>
</tr>
<tr>
<td>Boscarino (1988)</td>
<td></td>
<td>✓</td>
<td></td>
<td>In a correlational design, larger hospitals are perceived as providing higher-quality care. Does not focus on company size mechanism.</td>
<td></td>
</tr>
<tr>
<td>Chaudhuri et al. (2018)</td>
<td></td>
<td>✓</td>
<td></td>
<td>In a correlational design, larger automotive companies are perceived as producing higher-quality cars. Does not focus on company size mechanism.</td>
<td></td>
</tr>
<tr>
<td>Diamantopoulos and Siguaw (2015)</td>
<td>High-Tech (See Web Appendix Table WC2)</td>
<td>✓</td>
<td></td>
<td>In a correlational design, larger marketing research companies are perceived as producing higher-quality research. Does not focus on company size mechanism.</td>
<td></td>
</tr>
<tr>
<td>Kaufmann and Körte (2010)</td>
<td></td>
<td>✓</td>
<td></td>
<td>In a correlational design, larger companies in the manufacturing industry that produce products such as chemicals, rubber and plastics, industrial machinery, electro/electronics, furniture, and motor vehicles and parts are perceived as producing higher-quality products. Does not focus on company size mechanism.</td>
<td></td>
</tr>
<tr>
<td>Paharia, Avery, and Keinan (2014)</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>In a pre-test, larger (vs. smaller) brands are perceived as producing superior hospitals, security, airlines, infant formula, and medical devices. The authors find no effect of company size on the perceived quality of an automotive company. Does not focus on company size mechanism.</td>
<td></td>
</tr>
<tr>
<td>Viadiu, Fa, and Saizarbitoria (2002)</td>
<td></td>
<td>✓</td>
<td></td>
<td>In a correlational design, larger management consultancies are perceived as offering higher-quality services. Does not focus on company size mechanism.</td>
<td></td>
</tr>
<tr>
<td>Morgan (1993)</td>
<td></td>
<td>✓</td>
<td></td>
<td>In a correlational design, larger restaurant chains are perceived as serving lower-quality food. Does not focus on company size mechanism.</td>
<td></td>
</tr>
<tr>
<td>Skinner (2007)</td>
<td>Low-Tech (See Web Appendix Table WC2)</td>
<td>✓</td>
<td></td>
<td>In a correlational design, larger retailers (many of which were in unspecified industries) perceived themselves as producing lower-quality service outcomes. (Note: This investigation examined retailers’ perceptions of their output rather than consumers’ perceptions of retailers’ output). Does not focus on company size mechanism.</td>
<td></td>
</tr>
<tr>
<td>Trinca, Duizer, and Keller (2022)</td>
<td></td>
<td>✓</td>
<td></td>
<td>In a correlational design, larger hospitals are perceived as providing lower-quality meal services. Does not focus on company size mechanism.</td>
<td></td>
</tr>
</tbody>
</table>

Notes.
(1) The investigations that found a positive relationship between company size and quality evaluations examined domains perceived as high-tech, whereas investigations that found the opposite examined domains perceived as low-tech (see Web Appendix Table WC2). The proposed lay theories framework can reconcile these past findings, and it also is generative—it makes predictions for when a larger company size will improve versus harm quality evaluations. Note that we do not include papers that find no relationship between company size and quality evaluations (e.g., Yang and Aggarwal 2019).
(2) Table 1 and the literature review tables in Web Appendices G and H report only the literature that measured respondents’ evaluations of product quality or service quality, specifically. The current research focuses on quality evaluations, which are theoretically and empirically distinct from other constructs such as satisfaction (e.g., Cronin and Taylor 1992; Rust and Oliver 1994; Spreng and Mackoy 1996).
<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>DV</th>
<th>IV</th>
<th>Test Statistic</th>
</tr>
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<tbody>
<tr>
<td>1*</td>
<td>480 Companies</td>
<td>Net Promoter Score</td>
<td>Product Type x Company Size</td>
<td>$B = 1.90, \ SE = .52, t(476) = 3.67, p &lt; .001$</td>
</tr>
<tr>
<td>2*</td>
<td>601 MTurk</td>
<td>Quality Evaluations</td>
<td>Smaller Company</td>
<td>Larger Company</td>
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<tr>
<td>3*</td>
<td>554 MTurk</td>
<td>Quality Evaluations</td>
<td>Smaller Company</td>
<td>Larger Company</td>
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<tr>
<td>4a</td>
<td>489 MTurk</td>
<td>Quality Evaluations</td>
<td>baseline</td>
<td>intervention</td>
</tr>
<tr>
<td>4b*</td>
<td>512 MTurk</td>
<td>Quality Evaluations</td>
<td>baseline</td>
<td>intervention</td>
</tr>
<tr>
<td>5*</td>
<td>191 MTurk</td>
<td>Choice of Smaller (vs. Larger) Company’s Product</td>
<td>67.4%</td>
<td>34.3%</td>
</tr>
<tr>
<td>6*</td>
<td>208 Students</td>
<td>Choice of Smaller (vs. Larger) Company’s Product</td>
<td>64.7%</td>
<td>46.2%</td>
</tr>
</tbody>
</table>

**Notes:** * indicates pre-registered study. IM = intrinsic motivation; DV = dependent variable; IV = independent variable. For all studies, we focus on the primary outcome variable. For continuous outcomes (i.e., quality evaluations), cell means are reported with standard deviations in parentheses. For binary outcomes (i.e., choice of products), we report the choice share of the smaller company’s product. Studies 4a–4b included a no-size control condition for exploratory purposes (study 4a: $M_{control}$ = 4.44, $SD$ = .86, $n = 97$; study 4b: $M_{control}$ = 4.22, $SD$ = 1.11, $n = 97$).
Notes.
(1) Figure 1 charts the proposed lay theories conceptual model. We propose that consumers hold two lay theories regarding how a company’s size relates to its core resources: its employees (specifically, their intrinsic motivation) and its financial resources (specifically, financial resources available for costly R&D). Perceived product type (low-tech vs. high-tech) differentially affects the accessibility of the lay theories, which determines the direction of the effect of company size (larger vs. smaller) on quality evaluations and product choices.

(2) We employ a diversity of study designs to test this proposed conceptual model. In studies involving perceived product type as a factor (Studies 1, 2, 3, 5, and 6), whether we treat the product type (low-tech vs. high-tech) as the moderator or the independent variable (IV) depends on the outcome of interest: (i) When quality evaluations are the outcome of interest, we treat the product type as the moderator and company size as the IV (analyses in Studies 1–3). (ii) When the accessibilities of the two lay theories are the outcome of interest, we treat the product type as the IV (parallel mediation analyses in Studies 3 and 5). (iii) When product choice (larger vs. smaller company) is the outcome of interest, we treat product type as the IV and company size is embedded in the choice outcome (Studies 5–6).

FIGURE 2:
REGRESSION COEFFICIENT OF COMPANY SIZE AS A PREDICTOR OF NPS FOR COMPANY INDUSTRIES PERCEIVED AS LOW-TECH TO HIGH-TECH

Notes. The solid line represents the estimated regression coefficient of company size as a predictor of NPS (i.e., the simple effect) across the continuum from perceived low-tech to perceived high-tech industries, with 95% confidence bands marked by gray dashed lines. The vertical dotted lines mark the Johnson-Neyman (JN) points at which the simple effect becomes significant (i.e., $p < .05$). Specifically, company size was negatively associated with NPS in industries that were perceived as relatively low-tech (JN ≤ 1.94) but was positively associated with NPS in industries that were perceived as relatively high-tech (JN ≥ 3.57). The range of the x-axis reflects the industry type score (averaged across participants’ ratings at the company level), which ranged from 1.6 to 7.
FIGURE 3:
INTERACTION BETWEEN COMPANY SIZE FRAME AND PRODUCT TYPE ON QUALITY EVALUATIONS FOR EACH PRODUCT REPLICATE (STUDY 2)

Notes. Error bars indicate 95% confidence intervals of the mean. + \( p = .079; \) **\( p = .002; \) ***\( p < .001. \)

FIGURE 4:
INTERACTION BETWEEN COMPANY SIZE FRAME AND PRODUCT TYPE ON QUALITY EVALUATIONS (STUDY 3)

Notes. Error bars indicate 95% confidence intervals of the mean. ***\( p < .001. \)

FIGURE 5:
MODERATED MEDIATION (STUDY 3)

Notes. Mapping onto our conceptual model (Figure 1), Figure 5 charts moderated mediation in Study 3. Low-tech (vs. high-tech) products increase the accessibility of the intrinsic motivation lay theory, which leads consumers to infer that products made by larger (vs. smaller) companies are of lower quality. High-tech (vs. low-tech) products increase the accessibility of the financial resources lay theory, which leads consumers to infer that products made by larger (vs. smaller) companies are of higher quality. Path coefficients are unstandardized betas. The value in parentheses indicates the relationship between the product type and quality evaluations after controlling for the mediators. ***\( p < .001. \)
FIGURE 6:
CHALLENGING THE DIAGNOSTICITY OF THE INTRINSIC MOTIVATION LAY THEORY AFFECTS HOW CONSUMERS INFERENCE THE QUALITY OF LOW-TECH PRODUCTS FROM COMPANY SIZE (STUDY 4A)

![Bar chart showing quality scores for different conditions]

**Notes.** Error bars indicate 95% confidence intervals of the mean. *** $p < .001$.

FIGURE 7:
CHALLENGING THE DIAGNOSTICITY OF THE FINANCIAL RESOURCES LAY THEORY AFFECTS HOW CONSUMERS INFERENCE THE QUALITY OF HIGH-TECH PRODUCTS FROM COMPANY SIZE (STUDY 4B)

![Bar chart showing quality scores for different conditions]

**Notes.** Error bars indicate 95% confidence intervals of the mean. * $p < .05$; *** $p < .001$.

FIGURE 8:
PARALLEL MEDIATION (STUDY 5)

![Diagram showing mediation analysis]

**Notes.** The path coefficients are unstandardized betas. The value in parentheses indicates the effect of product type (low-tech vs. high-tech) on choice after controlling for the mediators. * $p < .05$; ** $p < .01$; *** $p < .001$. 

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WEB APPENDIX

Does Company Size Shape Product Quality Inferences? Larger Companies Make Better High-Tech Products, but Smaller Companies Make Better Low-Tech Products

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OSF Link to data, syntax, pre-registrations, and materials for all studies: https://osf.io/vtfb2

These materials have been supplied by the authors to aid in the understanding of their paper. The AMA is sharing these materials at the request of the authors.
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<td></td>
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<td>Examples of findings from the literature examining the effect of market</td>
<td>W36-W37</td>
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<td>share and top dog status on quality evaluations</td>
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</table>
WEB APPENDIX A: PILOT DATA

Web Appendix A1

*Pilot Data A: Secondary data capturing the salience of company size metrics in the marketplace*

A research assistant blind to the current theorizing employed a random number generator to randomly select 100 companies from the Fortune 500 list and scraped data from these companies’ websites. The research assistant coded whether or not each website included information about the company’s size metrics (e.g., number of employees and/or revenue). Analysis revealed that a majority of the websites communicated metrics of their company’s size: 95% mentioned the number of company employees and/or the company’s revenue. Specifically, 86% mentioned the number of company employees, and 76% mentioned the company’s revenue. These data highlight that size metrics are a salient cue to consumers in the marketplace. In Web Appendix B, we include examples of how company size is highlighted on company websites as well as in other real public communications (e.g., in companies’ social media posts, in the popular press, and in other online resources such as Wikipedia).

Web Appendix A2

*Pilot Data B: Consumers’ awareness of company size*

We recruited 100 Prolific participants ($M_{age} = 30.66$, SD = 11.05; 48.0% female) to complete a survey about their purchase behavior. We asked participants, “When buying a product from a company, which of the following characteristics about the company do you at least occasionally have a sense of” with options to indicate “Yes, when buying a product from a company, I have a general sense of this” or “No, when buying a product from a company, I do NOT have a general sense of this.” Participants viewed and selected one of these two response options for the following four characteristics, which were presented in random order: “Whether the company that made the product is relatively big or small” (81% said yes); “Whether the company that made the product is relatively new or old” (72% said yes); “Whether the company that made the product produces products primarily by hand or machine” (58% said yes); “Whether the company that made the product releases relatively high or low levels of greenhouse gases” (9% said yes). In sum, a majority (81%) of participants in our sample reported being generally aware of company size at least occasionally when buying a product from a company ($z = 6.10$, $p < .001$).

Web Appendix A3

*Pilot Data C: Survey of marketing managers*

**Method**

We recruited 51 ($M_{age} = 37.59$, SD = 11.30; 54.9% female) professional marketing managers from Prolific by leveraging filters for (1) past employment in marketing/sales and (2) management experience. The managers in our sample had an average of 10.5 years of full-time experience in marketing/sales, with an average of seven direct/indirect reports.

The survey proceeded in three parts. We first asked managers three multiple choice
questions regarding their knowledge about the effects of companies’ sizes on consumers’
evaluations of the quality companies produce, as well as the managers’ assessments of the utility
of obtaining information about the effects of company size on consumers’ quality evaluations
(see Table WA1 for these questions).

Next, managers answered the following questions: (1) “How do you think company size
information influences consumers’ judgments of product quality, if at all?” and (2) “Why is it
important or unimportant for you (and/or the company you work for) to understand how
company size information influences consumers’ judgments of product quality?” Managers
entered their responses to each question into separate open-ended response boxes.

Lastly, we asked managers to predict the influence of a company’s size on consumers’
judgments of the quality of the products those companies produce. Specifically, we asked, “If
you were to guess, what influence (IF ANY) would a company’s size have on judgments of its
quality?” Managers responded by choosing one of five options: (1) “Consumers will judge a
product as higher quality if it is made by a larger (vs. smaller) company, for both high-tech and
low-tech product categories,” (2) “Consumers will judge a product as higher quality if it is made
by a smaller (vs. larger) company for low-tech product categories and will judge a product as
higher quality if it is made by a larger (vs. smaller) company for high-tech product categories,”
(3) “Consumers will judge a product as higher quality if it is made by a larger (vs. smaller)
company for low-tech product categories and will judge a product as higher quality if it is made
by a smaller (vs. larger) company for high-tech product categories,” (4) “Consumers will judge a
product as higher quality if it is made by a smaller (vs. larger) company, for both high-tech and
low-tech product categories,” (5) “Consumers will judge a product as similar in quality
regardless of whether it is made by a larger or a smaller company, for both high-tech and low-
techn product categories.”

Finally, participants provided various demographic and employment details, including
their years of managerial experience and number of direct/indirect reports.

Results

Knowledge and importance of company size on quality evaluations. Overall, the
marketing managers thought that there was much to be learned about how company size
information influences consumers’ evaluations of product quality ($M = 5.29$, $SD = 1.14$; this
rating was significantly greater than the scale midpoint, $p < .001$). A majority (80.4%)
recognized that there is utility in obtaining information about how company size influences
consumers’ quality evaluations. Further, the managers on average indicated that they currently
did not know enough about how company size influences consumers’ judgments of product
quality ($M = 3.27$, $SD = 1.44$; this rating was significantly lower than the scale midpoint, $p < .001$).

<table>
<thead>
<tr>
<th>Question</th>
<th>$M$ (SD) / %</th>
<th>Comparison to scale midpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent do you agree or disagree that there is still a lot to be learned about how company size information (e.g., amount of revenue, number of employees) influences consumers’ judgments of product quality when consumers are aware of this information for a company? (1 = Strongly disagree; 7 = Strongly agree)</td>
<td>5.29 (1.14)</td>
<td>$t(50) = 8.13, p &lt; .001, d = 1.14$</td>
</tr>
<tr>
<td>Would it be useful for you or your organization to have a better understanding of how company size information (e.g., amount of revenue, number of employees) influences consumers’ judgments of product quality? (Option 1 =</td>
<td>80.4%</td>
<td>$z = 4.21, p &lt; .001$</td>
</tr>
</tbody>
</table>
No, it would not be useful, Option 2 = Yes, it would be useful to have a deeper understanding. The percentage noted is the percent of participants who selected Option 2.

Think about all of the information that is possible to know about the impact of a company’s size (e.g., amount of revenue, number of employees) on consumers’ judgments of product quality. How much do you feel that you know versus don’t know about how company size information (revenue, number of employees) influences consumers’ judgments of product quality when consumers are aware of this information for a company? (1 = I don’t know everything that is worth knowing about this topic; 7 = I do know everything that is worth knowing about this topic)

<table>
<thead>
<tr>
<th>Score</th>
<th>t(50)</th>
<th>p</th>
<th>d</th>
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</thead>
<tbody>
<tr>
<td>3.27</td>
<td>-3.59</td>
<td>&lt; .001</td>
<td>-.50</td>
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</tbody>
</table>

Open-ended responses. The first open-ended question queried the marketing managers about how they thought company size might affect consumers’ evaluations of product quality. A research assistant blind to the hypotheses coded their responses. In 52.9% of the responses, the managers described the belief that consumers evaluate products as higher quality when they are produced by larger companies. The remaining managers described either the opposite belief (i.e., 15.7% of managers believed that consumers evaluate products as higher quality when they are produced by smaller companies), mixed effects (21.6%), or that company size has no impact on consumers’ quality evaluations (9.8%). None of the managers articulated that produce type would moderate the relationship between company size and quality evaluations (see example quotes in Table WA2 below).

<table>
<thead>
<tr>
<th>Marketing Manager Description</th>
<th>Quotea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female, Age 39; 7 years of experience in marketing/sales; Industry: Public service</td>
<td>“Consumers tend to believe large companies are more established and trustworthy and see the product as reflecting these standards. They believe the product quality will be higher than smaller companies as a whole.”</td>
</tr>
<tr>
<td>Female, Age 41; 9 years of experience in marketing/sales; Industry: Digital marketing</td>
<td>“Company size often acts as a trust signal; the bigger the company and the longer it has been in existence, the more reliable it must be.”</td>
</tr>
<tr>
<td>Female, Age 37; 5 years of experience in marketing/sales; Industry: Sales</td>
<td>“company size would mean better quality products because more people are working on the products.”</td>
</tr>
<tr>
<td>Female, Age 27; 9 years of experience in marketing/sales; Industry: Fintech</td>
<td>“I think it has a positive effect, i.e. the bigger the company, the more trustworthy it is perceived to be. If this happens to be an incorrect assumption, it would be useful to know so that we could assess our competitive position better.”</td>
</tr>
<tr>
<td>Male, Age 45; 9 years of experience in marketing/sales; Industry: Manufacturing</td>
<td>“I don’t think the company size information influences the consumer at all. The consumer cares about quality of end product and whoever that product delivers consistency, value for money and sustainability.”</td>
</tr>
<tr>
<td>Female, Age 29; 4 years of experience in marketing/sales; Industry: Retail</td>
<td>“If the consumer knows how big the company is and that they are well established they will feel more inclined to purchase from that company over another they do not know much about.”</td>
</tr>
</tbody>
</table>
More exclusive products or services might benefit from a perceived smaller company size, tailored to niche customers.

The second open-ended question asked the marketing managers why it is important or unimportant for them (and/or the company they work for) to understand how company size information influences consumers’ product quality evaluations. A majority of managers (72.5%) noted that it is important to understand the effect of company size on consumers’ quality evaluations (see example quotes in Table WA3 below).

**TABLE WA3: EXAMPLE QUOTES FROM MARKETING MANAGERS ABOUT THE IMPORTANCE OF UNDERSTANDING THE RELATIONSHIP BETWEEN COMPANY SIZE AND QUALITY PERCEPTIONS**

<table>
<thead>
<tr>
<th>Marketing Manager Description</th>
<th>Quote*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female, Age 59; 28 years of experience in marketing/sales; Industry: Housing</td>
<td>“It would be extremely useful to know if there has been a shift in people's perceptions as to whether they still believe a larger company produces higher quality products.”</td>
</tr>
<tr>
<td>Male, Age 30; 8 years of experience in marketing/sales; Industry: Entertainment, events, arts</td>
<td>“It is quite important to know and recognise that bigger does not really mean better quality.”</td>
</tr>
<tr>
<td>Male, Age 31; 4 years of experience in marketing/sales; Industry: E-commerce</td>
<td>“It could be important and useful for me to understand for the business I work in as we are a medium-sized family-run business but operating online where the size of the company is potentially difficult for consumers to gauge. Marketing strategies could be formulated around either emphasising the length of time the business has been running (i.e. should consumers prefer more established companies) or emphasising the family-run side of things.”</td>
</tr>
<tr>
<td>Male, Age 35; 5 years of experience in marketing/sales; Industry: Banking</td>
<td>“It is important to understand this link as there may be different types of information or metrics that smaller companies can put out about their size/output that might more positively affect the opinion of consumers, thus swaying them towards their products.”</td>
</tr>
<tr>
<td>Female, Age 41; 4 years of experience in marketing/sales; Industry: Business services</td>
<td>“It’s important for a company to understand how consumers view the size of a company and how they can help influence from their point of view.”</td>
</tr>
</tbody>
</table>

*These quotes are full-length verbatim responses (i.e., any spelling or grammatical errors are not corrected).

Managers’ intuition about the effect of company size on quality evaluations as a function of product type. 77% of managers failed to intuit the relationship between company size and perceived quality. Specifically, approximately half of the managers (47.1%) thought that consumers evaluate both low-tech and high-tech products as higher quality when they are made by larger (vs. smaller) companies. 23.5% of the managers intuited our findings that consumers evaluate low-tech products as higher quality when they are made by smaller (vs. larger) companies, but evaluate high-tech products as higher quality when they are made by larger (vs. smaller) companies. 11.8% of the managers believed that consumers evaluate low-tech products as higher quality when they are made by larger (vs. smaller) companies, but evaluate high-tech products as higher quality when they are made by smaller (vs. larger) companies. The remaining
managers believed that consumers evaluate both high-tech and low-tech products as higher quality when they are made by smaller (vs. larger) companies (9.8%), or that consumers evaluate products as similar in quality regardless of whether they are made by larger versus smaller companies (7.8%).

Web Appendix A4

_Pilot Data D: Consumers’ awareness of the intrinsic motivation lay theory and the financial resources lay theory_

We recruited 102 MBA students from a university in the northeast United States ($M_{age} = 29.51$, $SD = 2.37$; 42.2% female) to complete a survey about their purchase experiences. We randomly assigned participants to one of two conditions (Intrinsic Motivation Lay Theory vs. Financial Resources Lay Theory).

In the Intrinsic Motivation Lay Theory condition, we asked participants, “Which of the following statements do you agree with the most?” with the option to indicate “Smaller companies have employees who love doing their work and find it more meaningful (i.e., more intrinsically motivated employees), compared to larger companies” or “Larger companies have employees who love doing their work and find it more meaningful (i.e., more intrinsically motivated employees), compared to smaller companies.” A total of 92% (46/50) recognized the intrinsic motivation lay theory, selecting the first option. For participants who selected this option, we then asked them, “When you are thinking about the quality of these products, do you ever think about the following consideration? Or do you think that others consider the following?: Smaller companies have employees who love doing their work and find it more meaningful (i.e., more intrinsically motivated employees), compared to larger companies” with the option to indicate “yes” or “no.” Of the 46 (out of 50) participants who recognized the intrinsic motivation lay theory, 71.7% (33/46) reported that they or others consider the intrinsic motivation lay theory.

In the Financial Resources Lay Theory condition, we asked participants, “Which of the following statements do you agree with the most?” with the option to indicate “Larger companies have more financial resources to use and invest in product research and development, compared to smaller companies” or “Smaller companies have more financial resources to use and invest in product research and development, compared to larger companies.” A total of 100% (52/52) recognized the financial resources lay theory, selecting the first option. For participants who selected this option, we then asked them, “When you are thinking about the quality of these products, do you ever think about the following consideration? Or do you think that others consider the following?: Larger companies have more financial resources to use and invest in product research and development, compared to smaller companies” with the option to indicate “yes” or “no.” Of the 52 (out of 52) participants who recognized the financial resources lay theory, 73.1% (38/52) reported that they or others consider the financial resources lay theory.
WEB APPENDIX B: EXAMPLES FROM REAL PUBLIC COMMUNICATIONS HIGHLIGHTING COMPANY SIZE, COMPANY EMPLOYEES’ INTRINSIC MOTIVATION, AND HOW COMPANIES FRAME THEIR R&D EXPENDITURE

Examples Highlighting Company Size:

FIGURE WB1: COMPANY “ABOUT US” PAGE EMPHASIZING SMALL SIZE OF A COMPANY PRODUCING RELATIVELY HIGH-TECH PRODUCTS

Thank you for your interest in our company. We invite you to learn more about MRI Technologies and where we are going.

We are a small company working to make a big difference.

Source: https://www.mricompany.com/about-us/

FIGURE WB2: COMPANY “ABOUT US” PAGE EMPHASIZING LARGE REVENUE AND NUMBER OF EMPLOYEES OF A COMPANY PRODUCING RELATIVELY LOW-TECH PRODUCTS

In 2020, Lindt & Sprüngli celebrates its 175th anniversary. As a global leader in the premium chocolate sector, the company looks back on a long-standing tradition with its origins in Zurich, Switzerland. Today, quality chocolate products by Lindt & Sprüngli are made at 11 of its own production sites in Europe and the USA. They are distributed by 28 subsidiary companies and branch offices, in about 500 own stores, and also via a comprehensive network of more than 100 independent distributors around the globe. With over 14,600 employees, the Lindt & Sprüngli Group reported sales worth CHF 4.51 billion in 2019.

Source: https://www.lindt-spruenigli.com/about-us

FIGURE WB3: WIKIPEDIA PAGE EMPHASIZING LARGE REVENUE OF A COMPANY PRODUCING RELATIVELY LOW-TECH PRODUCTS

<table>
<thead>
<tr>
<th><strong>Trade name</strong></th>
<th>KIND Healthy Snacks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Private</td>
</tr>
<tr>
<td><strong>Industry</strong></td>
<td>Snack Foods</td>
</tr>
<tr>
<td><strong>Founded</strong></td>
<td>2004</td>
</tr>
<tr>
<td><strong>Founder</strong></td>
<td>Daniel Lubetzky</td>
</tr>
<tr>
<td><strong>Headquarters</strong></td>
<td>New York, NY, U.S.</td>
</tr>
<tr>
<td><strong>Products</strong></td>
<td>Snack Bars, Granola Bars, Granola</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td>5,000,000,000 United States dollar</td>
</tr>
<tr>
<td><strong>Website</strong></td>
<td><a href="http://www.kindsnacks.com">www.kindsnacks.com</a></td>
</tr>
</tbody>
</table>

Source: https://en.wikipedia.org/wiki/Kind_(company)
FIGURE WB4: COMPANY TWITTER BIO EMPHASIZING LARGE NUMBER OF EMPLOYEES OF A COMPANY PRODUCING RELATIVELY HIGH-TECH PRODUCTS

Source: https://twitter.com/Rosendin

FIGURE WB5: COMPANY FACTS AND FIGURES PAGE EMPHASIZING LARGE REVENUE AND NUMBER OF EMPLOYEES OF A COMPANY PRODUCING RELATIVELY HIGH-TECH PRODUCTS

Source: https://www.olympus-global.com/company/profile/facts-figures/?page=company

FIGURE WB6: TWITTER BIO EMPHASIZING SMALL SIZE OF A COMPANY PRODUCING RELATIVELY HIGH-TECH PRODUCTS

Source: https://twitter.com/reallyinteract?lang=en
FIGURE WB7: NEWS ARTICLE EMPHASIZING LARGE REVENUE OF A COMPANY PRODUCING RELATIVELY LOW-TECH PRODUCTS


FIGURE WB8: COMPANY “ABOUT US” PAGE EMPHASIZING SMALL SIZE OF A COMPANY PRODUCING RELATIVELY HIGH-TECH PRODUCTS

Source: http://www.cadetnm.com/

Examples Highlighting Company Employees’ Intrinsic Motivation:

FIGURE WB9: EXAMPLE OF REAL PUBLIC COMMUNICATION HIGHLIGHTING AN EMPLOYEE’S INTRINSIC MOTIVATION BY SPOTLIGHTING THE EMPLOYEE’S LOVE OF THEIR WORK

FIGURE WB10: EXAMPLE OF REAL PUBLIC COMMUNICATION HIGHLIGHTING AN EMPLOYEE’S INTRINSIC MOTIVATION BY SPOTLIGHTING THE EMPLOYEE’S ENJOYMENT OF THEIR WORK

Source: https://careers.southwestair.com/culture

FIGURE WB11: EXAMPLE OF REAL PUBLIC COMMUNICATION HIGHLIGHTING AN EMPLOYEE’S INTRINSIC MOTIVATION BY SPOTLIGHTING THE EMPLOYEE’S LOVE OF THEIR WORK AND THE MEANING THEY DERIVE FROM THEIR WORK

Source: Original source has moved; for related sources see:
https://www.auto-owners.com
Examples Highlighting How Companies Frame their R&D Expenditure:

**FIGURE WB12:** EXAMPLE OF COMPANY FRAMING ITS R&D EXPENDITURE AS RELATIVELY LARGE RELATIVE TO THE COMPANY’S “BUDGET”

Source: [https://midot.com/about/the-science/](https://midot.com/about/the-science/)

**FIGURE WB13:** EXAMPLE OF COMPANY FRAMING ITS R&D EXPENDITURE AS LARGE IN THE ABSENCE OF NUMERICAL METRICS

Source: [https://graphicpkg.metrio.net/indicators/products/innovation_and_design/innovation_and_design](https://graphicpkg.metrio.net/indicators/products/innovation_and_design/innovation_and_design)

**FIGURE WB14:** EXAMPLE OF COMPANY FRAMING ITS R&D EXPENDITURE AS LARGE IN THE ABSENCE OF NUMERICAL METRICS

Source: [https://www.ljungstrom.com/about/#research-and-development](https://www.ljungstrom.com/about/#research-and-development)
WEB APPENDIX C: PRE-TESTS

Web Appendix C1

*Pre-test reported in the Introduction documenting the two lay theories*

We conducted a pre-registered pre-test to document the existence of the two lay theories that we propose arise from company size metrics.

*Method*

We pre-registered this pre-test (aspredicted.org/FVS_ENN) and assigned 199 MTurk workers (M<sub>age</sub> = 39.61, SD = 12.32, 43.7% female) to one condition in a 2 (framed company size: smaller vs. larger) between-subjects design. Participants evaluated the quality of four products created by four different target companies (order counterbalanced), wherein the four target companies were either each framed as relatively larger or smaller compared to two other competitor companies (adapted from Yang and Aggarwal 2019).

We measured participants’ lay theories about the levels of the two core resources that we expected to be affected by company size (order counterbalanced): (1) perceptions of the company employees’ intrinsic motivation (intrinsic motivation lay theory), and (2) perceptions of the company’s financial capacity to fund expensive research and development (financial resources lay theory). We measured the intrinsic motivation lay theory using a four-item intrinsic motivation scale (α = .97): Participants indicated the extent to which they thought people who work at the company “love doing their work,” “find meaning in their work,” “value doing something that makes them feel good about themselves,” and “find their work enjoyable” (1 = Not at all; 7 = Very much). This scale captures the definition of intrinsic motivation, which is the motivation to pursue an activity for interest, meaning, and enjoyment (Grant 2008; Heath 1999; Woolley and Fishbach 2018). We measured the financial resources lay theory using a two-item scale (α = .99): Participants indicated the extent to which they thought the company “has a lot of financial resources to invest in product research and development” and “has a lot of financial resources that it can use to develop new products” (1 = Not at all; 7 = Very much).

*Results*

Analyses revealed evidence for the existence of both lay theories that we propose consumers hold based on company size metrics: Participants believed employees at a larger (vs. smaller) company would be less intrinsically motivated (M<sub>larger</sub> = 4.05, SD = 1.26; M<sub>smaller</sub> = 4.98, SD = 1.05; t(197) = 5.66, p < .001, d = .80) and believed a larger (vs. smaller) company would have greater capacity to fund R&D (M<sub>larger</sub> = 5.64, SD = 1.12; M<sub>smaller</sub> = 2.88, SD = 1.40; t(197) = 15.37, p < .001, d = 2.18).

Web Appendix C2

*Pre-test of perceptions of products examined in Studies 2-5 and Supplemental Study 4 as high-tech vs. low-tech*

We pre-tested the products examined in Studies 2-5 and Supplemental Study 4 to confirm that our manipulation of product type (low-tech vs. high-tech) succeeded.

*Method*
We recruited 101 MTurk workers (\(M_{age} = 40.12, \ SD = 11.43; 38.6\% \) female) to complete a product evaluation task. Participants evaluated the 12 products examined in Studies 2-5 and Supplemental Study 4, which were presented in a random order (i.e., chair, robotic wheel chair, blanket, smart electronic blanket, soap, infrared soap dispenser, meat, artificial meat product, drip coffee maker, smart coffee maker, wallet, and smart wallet). For each product, participants were asked to indicate whether the product is low-tech or high-tech on a 7-point scale (1 = This product is a low-tech product; 7 = This product is a high-tech product).

**Results**

We compared the evaluation of each product to the scale midpoint of four to confirm that the low-tech products were indeed perceived as low-tech, whereas the high-tech products were indeed perceived as high-tech (Table WC1).

**TABLE WC1: PRE-TEST RESULTS FOR PRODUCTS EXAMINED IN STUDIES 2-5 AND SUPPLEMENTAL STUDY 4**

<table>
<thead>
<tr>
<th>Product</th>
<th>(M) (SD)</th>
<th>Comparison to scale midpoint (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>1.85 (1.20)</td>
<td>(t(100) = -17.95, p &lt; .001)</td>
</tr>
<tr>
<td>Robotic wheel chair</td>
<td>6.29 (.86)</td>
<td>(t(100) = 26.6, p &lt; .001)</td>
</tr>
<tr>
<td>Blanket</td>
<td>1.52 (1.14)</td>
<td>(t(100) = -21.89, p &lt; .001)</td>
</tr>
<tr>
<td>Smart electronic blanket</td>
<td>5.54 (1.32)</td>
<td>(t(100) = 11.80, p &lt; .001)</td>
</tr>
<tr>
<td>Soap</td>
<td>1.88 (1.25)</td>
<td>(t(100) = -17.02, p &lt; .001)</td>
</tr>
<tr>
<td>Infrared soap dispenser</td>
<td>5.89 (1.12)</td>
<td>(t(100) = 16.95, p &lt; .001)</td>
</tr>
<tr>
<td>Meat</td>
<td>1.88 (1.37)</td>
<td>(t(100) = -15.59, p &lt; .001)</td>
</tr>
<tr>
<td>Artificial meat product</td>
<td>5.56 (1.20)</td>
<td>(t(100) = 13.06, p &lt; .001)</td>
</tr>
<tr>
<td>Drip coffee maker</td>
<td>3.27 (1.47)</td>
<td>(t(100) = -5.01, p &lt; .001)</td>
</tr>
<tr>
<td>Smart coffee maker</td>
<td>5.46 (1.34)</td>
<td>(t(100) = 10.93, p &lt; .001)</td>
</tr>
<tr>
<td>Wallet</td>
<td>1.69 (1.10)</td>
<td>(t(100) = -21.04, p &lt; .001)</td>
</tr>
<tr>
<td>Smart wallet</td>
<td>6.12 (1.22)</td>
<td>(t(100) = 17.47, p &lt; .001)</td>
</tr>
</tbody>
</table>

Web Appendix C3

*Pre-test of items examined in the prior literature which found that company size predicts quality evaluations (see Table 1 in main text)*

We theorize that prior investigations, which found that larger companies were perceived as producing higher quality, examined products and services in relatively high-tech domains (e.g., hospitals, cars, medical devices, and airlines; Boscarno 1988; Chaudhuri et al. 2018; Paharia et al. 2014). By contrast, investigations that found the opposite result examined comparatively low-tech domains (e.g., food services; Morgan 1993; Trinca, Duizer, and Keller 2022). We investigate this theorizing in Web Appendix C3.

**Method**

We recruited 98 MTurk workers (\(M_{age} = 44.45, \ SD = 12.87; 39.8\% \) female) to complete an evaluation task. Participants evaluated the 12 domains examined in the prior literature which found that company size predicts quality perceptions (see Table 1 in main text), presented in a random order (i.e., hospital, automotive company, marketing research company, manufacturing industry, medical device company, airline, infant formula company, security company, management consultancy company, restaurant, retailers’ customer service culture, and hospital
meal service). Participants indicated whether each domain is low-tech or high-tech on a 7-point scale (1 = This is low-tech; 7 = This is high-tech).

**Results**

We conducted one-sample $t$-tests comparing the evaluation of each item to the scale midpoint of four. These results were consistent with our theorizing that the items for which prior research suggested that a larger company size benefits quality evaluations were indeed perceived as high-tech, whereas the items for which prior research suggested that a larger company size harms quality evaluations were indeed perceived as low-tech (Table WC2). We thus suggest that our lay theories framework predicting when a larger company size benefits versus harms quality evaluations offers one parsimonious way to reconcile both sets of seemingly conflicting findings from prior literature.

<table>
<thead>
<tr>
<th>Finding from Prior Literature</th>
<th>Domain Evaluated (Paper)</th>
<th>$M$ (SD)</th>
<th>Comparison to scale midpoint (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larger company size benefits quality evaluations</td>
<td>Hospital (Boscarino 1988; Paharia, Avery, and Keinan 2014)</td>
<td>5.77 (1.53)</td>
<td>$t(97) = 11.41, d = 1.15$</td>
</tr>
<tr>
<td></td>
<td>Automotive Company (Chaudhuri et al. 2018)</td>
<td>6.09 (1.13)</td>
<td>$t(97) = 18.30, d = 1.85$</td>
</tr>
<tr>
<td></td>
<td>Marketing Research Company (Diamantopoulos and Siguaw 2015)</td>
<td>5.03 (1.61)</td>
<td>$t(97) = 6.34, d = .64$</td>
</tr>
<tr>
<td></td>
<td>Manufacturing Industry (Kaufmann and Körte 2010)</td>
<td>5.42 (1.41)</td>
<td>$t(97) = 9.93, d = 1.00$</td>
</tr>
<tr>
<td></td>
<td>Medical Device Company (Paharia et al. 2014)</td>
<td>6.53 (.74)</td>
<td>$t(97) = 34.08, d = 3.44$</td>
</tr>
<tr>
<td></td>
<td>Airline (Paharia et al. 2014)</td>
<td>6.03 (1.31)</td>
<td>$t(97) = 15.33, d = 1.55$</td>
</tr>
<tr>
<td></td>
<td>Infant Formula Company (Paharia et al. 2014)</td>
<td>5.21 (1.55)</td>
<td>$t(97) = 7.76, d = .78$</td>
</tr>
<tr>
<td></td>
<td>Security Company (Paharia et al. 2014)</td>
<td>5.62 (1.38)</td>
<td>$t(97) = 11.63, d = 1.17$</td>
</tr>
<tr>
<td></td>
<td>Management Consultancy Company (Viadiu, Fa, and Saizarbitoria 2002)</td>
<td>4.79 (1.65)</td>
<td>$t(97) = 4.73, d = .48$</td>
</tr>
<tr>
<td>Larger company size harms quality evaluations</td>
<td>Restaurant (Morgan 1993)</td>
<td>2.21 (1.26)</td>
<td>$t(97) = -14.01, d = -1.42$</td>
</tr>
<tr>
<td></td>
<td>Retailers’ Customer Service Culture (Skinner 2007)</td>
<td>2.45 (1.29)</td>
<td>$t(97) = -11.95, d = -1.21$</td>
</tr>
<tr>
<td></td>
<td>Hospital Meal Service (Trinca, Duizer, and Keller 2022)</td>
<td>2.26 (1.20)</td>
<td>$t(97) = -14.35, d = -1.45$</td>
</tr>
</tbody>
</table>
Post-test validating items capturing the intrinsic motivation lay theory and the financial resources lay theory in Studies 3 and 5

In this measurement validation post-test, we confirm that the single-item measures employed to capture the intrinsic motivation lay theory and the financial resources lay theory in Studies 3 and 5 indeed differentially capture each lay theory. To that end, we employed a factor analysis procedure to examine whether the single-item intrinsic motivation lay theory measure exclusively loads onto the multi-item intrinsic motivation lay theory measure, and whether the single-item financial resources lay theory measure exclusively loads onto the multi-item financial resources lay theory measure.

Method

We pre-registered this pre-test (aspredicted.org/Q7V_BV3) and randomly assigned 100 MTurk workers ($M_{\text{age}} = 44.45, \ SD = 13.52; \ 36.0\% \ \text{female}$) to one condition in a 2 (framed company size: smaller vs. larger) between-subjects design. As in the pre-test detailed in Web Appendix C1, participants evaluated the quality of four products produced by four different target companies (order counterbalanced), wherein the four target companies were either each framed as relatively larger or smaller compared to two other competitor companies (adapted from Yang and Aggarwal 2019). When participants viewed each product, they completed multi-item indices capturing the extent to which they would consider each lay theory when making the choice about whether to purchase products from the target companies. Depending on the company size frame condition, these questions were worded such that the focus was on beliefs about smaller (vs. larger) companies, as detailed in Table WC3.

The intrinsic motivation lay theory index included five items ($\alpha = .99$), and the financial resources lay theory index included three items ($\alpha = 1.00$) detailed in Table WC3. Participants responded to each item on separate 7-point scales ($1 = \text{Not at all thinking about this}; \ 7 = \text{Very much thinking about this}$).

Results

As expected, a factor analysis with varimax rotation and Eigenvalue > 1 on all of the items extracted two factors (see Table WC3). As predicted, the five intrinsic motivation lay theory items loaded onto one factor. Also as expected, the three financial resources lay theory items loaded onto one factor.

In order to streamline the procedure of the studies in the main manuscript that measured these lay theories (Studies 3 and 5), we leveraged the first item in each of these scales to cleanly
and easily capture each theory and then conducted this post-test to confirm the validity of using the first item.

**TABLE WC3: FACTOR ANALYSIS INCLUDING ALL ITEMS ASSESSED IN THE VALIDATION POST-TEST**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Prompt:</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intrinsic Motivation</strong></td>
<td><strong>Lay Theory</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Prompt:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Five-item scale (α = .99)</td>
<td>“As I made my choice, I would be thinking...”</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>“...that larger companies have less intrinsically motivated employees (i.e., the employees don’t love doing their work and do not find it as meaningful), compared to smaller companies.” [large frame]</td>
<td>.99</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>“...that smaller companies have more intrinsically motivated employees (i.e., the employees love doing their work and find it as meaningful), compared to larger companies.” [small frame]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>“...that employees at larger companies love doing their work less, compared to employees at smaller companies.”</td>
<td>.98</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>“...that employees at smaller companies love doing their work more, compared to employees at larger companies.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>“...that employees at larger companies do not value doing something that makes them feel good about themselves, compared to employees at smaller companies.” [large frame]</td>
<td>.96</td>
<td>.03</td>
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<td>“...that employees at smaller companies value doing something that makes them feel good about themselves more, compared to employees at larger companies.” [small frame]</td>
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<td>“...that employees at larger companies find their work less enjoyable, compared to employees at smaller companies.”</td>
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<td>“...that employees at smaller companies find their work more enjoyable, compared to employees at larger companies.” [small frame]</td>
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<td>“...that employees at larger companies find less meaning in their work, compared to employees at smaller companies.” [large frame]</td>
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<td>“...that employees at smaller companies find more meaning in their work, compared to employees at larger companies.” [small frame]</td>
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<td><strong>Financial Resources</strong></td>
<td><strong>Lay Theory</strong></td>
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<td><strong>Prompt:</strong></td>
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<tr>
<td>Three-item scale (α = 1.00)</td>
<td>“As I made my choice, I would be thinking ...”</td>
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<td>“...that larger companies have a lot of financial resources to invest in product research and development, compared to smaller companies.” [large frame]</td>
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<td>“...that larger companies have a lot of financial resources that they can use to develop new products, compared to smaller companies.” [large frame]</td>
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Web Appendix C5

**Post-tests to Study 4a: How emphasizing intrinsic motivation influences perceived trustworthiness**

**Post-test 1**

In this first post-test, we confirm that emphasizing employees’ intrinsic motivation does not undermine perceived trustworthiness of the company.

**Method**

We recruited 52 MTurk workers ($M_{age} = 43.75$, $SD = 13.52$; 38.5% female) to evaluate each of the three images presented in Figures WB9-WB11 in Web Appendix B. For each image, we asked, “Do you think that [company name] is a trustworthy company?” ($1 = $Definitely Not; $7 = $Definitely Yes).

**Results**

One-sample $t$-tests comparing responses to the scale midpoint (4) revealed that all three companies were seen as significantly trustworthy ($M_{Southwest} = 5.10$, $SD = 1.01$; $t(51) = 4.85$, $p < .001$; $M_{CarMax} = 4.85$, $SD = 1.13$; $t(51) = 5.45$, $p < .001$; $M_{Auto-Owners} = 4.74$, $SD = 1.36$; $t(51) = 3.93$, $p < .001$).

Overall, this post-test suggests that emphasizing employees’ intrinsic motivation does not undermine perceived trustworthiness of the company.

**Post-test 2**

In a second post-test, we confirm that emphasizing employees’ intrinsic motivation does not undermine perceived trustworthiness of the company relative to baseline.

**Method**

We recruited 101 MTurk workers ($M_{age} = 42.64$, $SD = 12.50$; 33.7% female) and randomly assigned them to one of two conditions (large baseline vs. large intrinsic motivation lay theory diagnosticity challenged) between-subjects design.

Using the same paradigm from Study 4a, participants learned about a company named Home Goods. In both conditions, Home Goods was framed as relatively larger than two competitor companies. In the large intrinsic motivation lay theory diagnosticity challenged condition, participants further learned that the employees at Home Goods had high intrinsic motivation. Thus, they learned information that challenged the lay theory that employees at larger companies have lower intrinsic motivation. We then asked participants, “Do you think that Home Goods is a trustworthy company?” ($1 = $Definitely Not; $7 = $Definitely Yes).

**Results**

There was no significant effect of condition on trustworthiness; participants perceived Home Goods to be similarly trustworthy in the large baseline condition ($M = 5.17$, $SD = 1.24$) as in the large intrinsic motivation lay theory diagnosticity challenged condition ($M = 5.37$, $SD = 1.32$; $t(99) = .77$, $p = .444$).

One-sample $t$-tests comparing responses to the scale midpoint (4) revealed that in both conditions, Home Goods were seen as significantly trustworthy ($M_{baseline} = t(51) = 6.80$, $p < .001$; $M_{intervention} = t(48) = 7.28$, $p < .001$).

Overall, this post-test provides further evidence that emphasizing employees’ intrinsic motivation does not undermine perceived trustworthiness of the company, in this case relative to a baseline condition.
WEB APPENDIX D: SUPPLEMENTAL STUDIES

Web Appendix D1

_Supplemental Studies 1a-1b: Is the intrinsic motivation lay theory accurate?_

Two supplemental studies examined whether the intrinsic motivation lay theory—the lay theory that smaller (vs. larger) companies employ more intrinsically motivated employees—is objectively accurate. These studies leveraged secondary data scraped from Indeed.com, which collects ratings from company employees regarding their objective intrinsic motivation (i.e., their sense of happiness and purpose at work). In addition to this objective metric of employees’ intrinsic motivation, we collected consumers’ perceptions of employees’ intrinsic motivation at these companies. Specifically, we provided a set of participants with information on the size of the companies at which the employees worked, and measured beliefs about whether employees at each company were intrinsically motivated. We tested for a divergence between objective (vs. subjective) intrinsic motivation as a function of company size, such that consumers may infer a relationship between company size and employees’ intrinsic motivation that does not exist.

In Supplemental Study 1a, our dataset consisted of 40 firms sampled from the Fortune 500 list of highest-grossing public corporations. We used these firms for two reasons: first, metrics of these companies’ size (their actual revenue and number of employees) are frequently touted, as these companies are publicly held. Second, these firms have been used in prior research assessing consumers’ lay theories about company size (Bhattacharjee, Dana, and Baron 2017), and are well-known to many consumers.

In Supplemental Study 1b, our dataset consisted of 136 restaurant chains listed on Fooducate, an app that consumers use to get recommendations about food based on ingredient quality. A key benefit of using this dataset is that it contains companies smaller than the Fortune 500 firms. Even though consumers may be less familiar with some of the smaller firms, we anticipated they would still assume that employees at larger (vs. smaller) companies would be less intrinsically motivated. However, one weakness of this dataset is that while information on company revenue was readily available (from Glassdoor.com), precise information on the number of company employees was not available. Thus, rather than being able to include information about each company’s revenue and number of employees in this dataset, we could only leverage information on the companies’ revenue. We present results of these two supplemental studies jointly because they provide a strong test of whether consumers’ lay theory consistently diverge from employees’ objective intrinsic motivation as a function of company size.

Supplemental Study 1a – 40 Fortune 500 Firms

We first scraped data from Indeed.com capturing the objective intrinsic motivation of employees working for the 40 firms from the Fortune 500 list that have been examined in prior research investigating the inferences consumers draw from company size (Bhattacharjee et al. 2017). The only exceptions were those for which we needed to swap out firms that had joined with other firms on the list through mergers and acquisitions (e.g., Kraft and Heinz).

Indeed.com assessed employees’ intrinsic motivation by asking them the following two items, which we averaged together ($r = .75$): “Do people feel happy at work most of the time?”
and “Do people feel their work has a clear sense of purpose?” (1 = Strongly disagree; 5 = Strongly agree). These items capture the validated definition of intrinsic motivation (Grant 2008; Heath 1999; Woolley and Fishbach 2018). We also collected publicly available information for these companies’ sizes (i.e., their revenue and number of employees in 2018).

To measure consumer beliefs about these employees’ intrinsic motivation, we recruited 52 participants from Prolific ($M_{age} = 31.25, SD = 11.03; 55.8\%$ female). Participants viewed and rated all 40 companies (i.e., thus producing a total of 2,080 ratings given the within-subject design), and the companies were presented in order from largest to smallest based on their revenue.

Specifically, for each company, participants viewed the company name, its revenue, and its number of employees. Next, participants indicated their beliefs about the intrinsic motivation of the employees at each company. To measure intrinsic motivation, we used the two items from the Indeed.com intrinsic motivation scale, that is, the same two items company employees themselves completed: (1) “Do people feel happy at work most of the time?” and (2) “Do people feel their work has a clear sense of purpose?” Participants indicated their agreement with each item on the same 5-point scale that the employees used (1 = Strongly disagree; 5 = Strongly agree). To further confirm that the two intrinsic motivation items from Indeed.com indeed capture intrinsic motivation, after rating these items participants also rated perceptions of employees’ intrinsic motivation on a validated four-item intrinsic motivation scale (Grant 2008; Heath 1999; Woolley and Fishbach 2018): (3) “They feel happy at work most of the time,” (4) “They feel their work has a clear sense of purpose,” (5) “They find their work enjoyable,” and (6) “They love doing their work.” Participants indicated their agreement with each item (1 = Strongly disagree; 5 = Strongly agree).

**Results**

**Internal validity validation.** To confirm that the items from Indeed.com capture intrinsic motivation, we conducted a factor analysis using the two-item Indeed.com scale and the four-item validated intrinsic motivation scale (Grant 2008; Heath 1999; Woolley and Fishbach 2018). A factor analysis with varimax rotation and Eigenvalue > 1 confirmed that all six items loaded onto a single factor (factor loadings in parentheses): “They feel happy at work most of the time” (.89); “They feel their work has a clear sense of purpose” (.88); “They find their work enjoyable” (.93); “They love doing their work” (.92); “They find meaning in their work” (.92); and “They value doing something that makes them feel good about themselves” (.89). Thus, the two-item scale from Indeed.com captures intrinsic motivation.

**Main analysis.** For subjective ratings of intrinsic motivation, we averaged the six items assessing participants’ perceptions of employees’ intrinsic motivation together ($\alpha = .96$). As our metric of company size, we computed z-scores for revenue and number of employees, which we averaged together ($r = .61$). For objective ratings of intrinsic motivation, we averaged the two items from Indeed.com ($r = .93$).

We regressed intrinsic motivation on company size $\times$ judgment type (objective vs. subjective ratings), nesting judgment type within company. This analysis revealed a significant interaction ($B = -.05, SE = .02, t = -2.12, p = .034$; Figure WD1 Panel A). This interaction demonstrates divergence between objective versus subjective ratings of intrinsic motivation as a function of company size. Whereas participants had a lay theory that employees working at larger (vs. smaller) companies were less intrinsically motivated ($B = -.04, SE = .02, t = -2.07, p = .039$), there was no significant relationship between employees’ objective intrinsic motivation and the size of the company at which they worked ($B = .01, SE = .02, t = .79, p = .431$).
Supplemental Study 1b – Restaurant Chains

To generalize the results of Supplemental Study 1a to another set of companies, we identified 136 restaurant chains that consumers frequent, using the full list of restaurant chains from Fooducate.com for which we were able to locate information on company size (i.e., revenue). Fooducate is an app that consumers use to get food recommendations based on ingredient quality. For each restaurant, we used Glassdoor.com to scrape information on company revenue and Indeed.com to scrape employees’ objective intrinsic motivation ratings, as in the prior dataset. In this study, we were unable to locate accurate information on number of employees, and so we relied on revenue as our sole metric of company size (Bussey 2016; Censky 2012; Pifer 2020).

To measure consumer beliefs about these employees’ intrinsic motivation, we recruited 101 participants from Prolific ($M_{age} = 29.85$, SD = 9.92; 55.0% female). Unlike in Supplemental Study 1a, in which participants were able to view and evaluate the full set of companies, given the large set of companies in Supplemental Study 1b, we had each participant view and rate a subset of 15 different companies that were randomly-selected (i.e., thus producing a total of 1,515 ratings). For each company, participants viewed the company name and its revenue; next, participants indicated their beliefs about the intrinsic motivation of the employees at each company on the six-item scale from Supplemental Study 1a.

Results

**Main analysis.** For subjective intrinsic motivation, we averaged the six items assessing participants’ perceptions of employees’ intrinsic motivation together ($\alpha = .95$). As our metric of company size, we used revenue. For objective ratings of intrinsic motivation, we averaged the two items from Indeed.com ($r = .86$).
We regressed intrinsic motivation on company size × judgment type (objective vs. subjective ratings), nesting judgment type within company. Conceptually replicating the results of Supplemental Study 1a, this analysis revealed a significant interaction ($B = -0.02$, $SE = .01$, $t = -2.77$, $p = .006$; Figure WD1 Panel B). This interaction again demonstrates divergence between objective versus subjective intrinsic motivation as a function of company size. Whereas participants had a lay theory that employees working at larger (vs. smaller) companies were less intrinsically motivated ($B = -0.01$, $SE = .004$, $t = -3.74$, $p < .001$), there was no significant relationship between employees’ objective intrinsic motivation and the size of the company at which they worked ($B = .001$, $SE = .004$, $t = .16$, $p = .870$).

Web Appendix D2

**Supplemental Study 2: Multi-item measurement of quality evaluations**

Studies 1-4b utilized a single-item measure of quality evaluations (i.e., a single-item proxy of quality evaluations drawn from secondary data in Study 1; a single-item direct measure of quality evaluations in Studies 2-4b). Single-item measures have been frequently used in the literature to assess quality evaluations (Ahire, Golhar, and Waller 1996; Spiller and Belogolova 2017). However, to provide evidence for the robustness of these results, this supplemental study utilized a multi-item measurement of quality evaluations.

We utilized a similar design to the one employed in Studies 2-3 to test the proposed interaction between company size and product type on quality evaluations, this time using a multi-item measurement of quality evaluations. We predicted an interaction between framed company size and product type (low-tech vs. high-tech), such that consumers would infer that larger (vs. smaller) companies produce lower quality low-tech products but infer that larger (vs. smaller) companies produce higher quality high-tech products.

**Method**

We pre-registered this study (aspredicted.org/DRA_SCI) and recruited 456 MTurk workers ($M_{age} = 42.00$, $SD = 13.64$; 54.4% female). Participants needed to pass an attention check to enter the study. We randomly assigned participants to one of four conditions in a 2 (framed company size: smaller vs. larger) × 2 (product type: low-tech vs. high-tech) between-subjects design.

As in Study 2, all participants first learned that they would view information about several different companies. All participants read that all companies were based in the same state. Participants also read that each company’s founders “came from industry, are well resourced, and are favored to succeed in the market,” which we used to ensure that our manipulation affected perceptions of company size, rather than perceptions of underdog status (Paharia et al. 2014). Furthermore, participants read that the products were machine-made in the United States, ensuring that participants did not infer that the products were handmade (Fuchs, Schreier, and Van Osselaer 2015).

All participants then viewed information about three companies. In the low-tech conditions, these three companies were described as home goods companies that produce blankets. In the high-tech conditions, these companies were described as technology companies that produce smart, electronic Wi-Fi enabled blankets. The stimuli for both products were drawn

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2 This sample size was determined using an estimated interaction effect size of $\eta_{p}^{2} = .04$ and effect size for planned contrasts of $\eta_{p}^{2} = .02$, which we expected based on analyses using similar stimuli from Study 2.
from Study 2. All participants viewed a picture of the blanket produced by one of the three companies, which was titled BlanketCo (vs. SmartThrowCo) in the low-tech (vs. high-tech) conditions.

We used the same framing manipulation of company size that we employed in Study 2. As in Study 2, the target company was framed as larger (vs. smaller), using metrics of revenue and number of employees, relative to two competitors.

Next, participants indicated their evaluations of the blanket’s quality on a three-item scale ($\alpha = .96$), adapted from multi-item quality evaluation scales utilized in prior research (Dodds, Monroe, and Grewal 1991; Richardson, Dick, and Jain 1994; Sprott and Shimp 2004). Specifically, participants in the low-tech (vs. high-tech) conditions answered the following questions: (1) “All things considered, compared to blankets (vs. smart electronic Wi-Fi enabled blankets) made by other companies, I would say that BlanketCo’s blankets (vs. SmartThrowCo’s smart electronic Wi-Fi enabled blankets) have…” (1 = Much lower quality; 7 = Much higher quality), (2) “Overall, compared to blankets (vs. smart electronic Wi-Fi enabled blankets) made by other companies, I would say that BlanketCo’s blankets (vs. SmartThrowCo’s smart electronic Wi-Fi enabled blankets) are…” (1 = Poor; 7 = Excellent), (3) “Compared to blankets (vs. smart electronic Wi-Fi enabled blankets) made by other companies, BlanketCo’s blankets (vs. SmartThrowCo’s smart electronic Wi-Fi enabled blankets) have…” (1 = Very poor quality; 7 = Very good quality).

Results

As pre-registered, we averaged the three-item quality measure into a single index ($\alpha = .96$). As predicted, an ANOVA of company size × product type predicting quality judgments revealed a significant interaction ($F(1, 452) = 13.13, p < .001, \eta^2_p = .03$). Participants evaluated the low-tech blanket as being lower quality when it was created by a company framed as larger versus smaller ($M_{\text{larger}} = 4.45, SD = 1.16; M_{\text{smaller}} = 4.75, SD = 1.08; F(1, 452) = 4.16, p = .042, \eta^2_p = .01$), whereas they evaluated the high-tech blanket as being of higher quality when it was created by a company framed as larger versus smaller ($M_{\text{larger}} = 5.03, SD = 1.03; M_{\text{smaller}} = 4.57, SD = 1.16; F(1, 452) = 9.53, p = .002, \eta^2_p = .02$).

This supplemental study demonstrates the robustness of our phenomenon using a multi-item measurement of quality evaluations.

Web Appendix D3

Supplemental Study 3: Why does the intrinsic motivation lay theory influence product quality evaluations?

We have demonstrated that consumers hold the intrinsic motivation lay theory—the lay theory that employees at larger (vs. smaller) companies are less intrinsically motivated. We have further demonstrated that low-tech (vs. high-tech) products prompt greater consideration of this lay theory, which leads consumers to infer that larger (vs. smaller) companies produce lower quality products (e.g., Study 3). As detailed in the Introduction in the main manuscript, we propose that consumers make this inference because consumers believe that less intrinsically motivated employees devote less effort to producing high quality products; drawing on the effort heuristic (Kruger et al. 2004), we propose that it is this perception of reduced effort that leads consumers to infer that less intrinsically motivated employees create lower quality products. We test this theorizing in this supplementary experiment. Of note, because Studies 3 and 5 reveal
that the evaluation of products perceived to be low-tech (vs. high-tech) prompts greater consideration of the intrinsic motivation lay theory, which in turn leads consumers to infer that products produced by larger (vs. smaller) companies are lower quality, we test this theorizing in the context of low-tech products.

Method

We recruited 437 MTurk workers ($M_{age} = 40.55$, SD = 12.44; 48.3% female). Participants needed to pass an attention check to enter the study. We randomly assigned participants to one condition in a 2 (company size: smaller vs. larger) between-subjects design. In both conditions, participants saw a tweet from a company called FoodCo, which either emphasized their smaller or larger company’s size (see Figure WD2).

FIGURE WD2: TWEETS EMPLOYED IN THE SMALLER COMPANY CONDITION (LEFT PANEL) AND THE LARGER COMPANY CONDITION (RIGHT PANEL)

Participants next learned that FoodCo makes almond milk, and participants indicated their evaluations of the milk’s quality on the same scale employed in Studies 2-4b. Next, participants indicated their perceptions of the intrinsic motivation of the employees at FoodCo on the same four-item intrinsic motivation index as in Supplemental Studies 1a-1b ($\alpha = .95$). In addition, on a three-item scale ($\alpha = .91$) drawn from prior research (e.g., Doherty, Patterson, and Van Bussel 2004; Mattila and Patterson 2004), participants indicated their perceptions of the amount of effort that these employees exerted. Specifically, participants answered the following questions: (1) “To what extent do you think that each employee that works at FoodCo puts a lot of effort into making sure that they do the best job they can do?”, (2) “To what extent do you think that each employee that works at FoodCo works hard to do the best job they can?”, and (3) “To what extent do you think that each employee that works at FoodCo does not put a lot of effort into making sure that they do the best job they can do?” (reverse-coded). Participants indicated their responses on separate scales (1 = Not at all; 7 = Very much).

Next, participants completed the following manipulation check item drawn from Study 2: “Is FoodCo a small company or a big company?” (1 = Very small company; 7 = Very large company).3

Results

Analysis of the manipulation check revealed that participants in the larger company condition perceived FoodCo as larger ($M = 5.63$, SD = 1.07) than participants in the smaller company condition ($M = 1.43$, SD = .86; $t(434) = 45.06$, $p < .001$, $d = 4.32$).

Also as predicted, participants evaluated the almond milk as being of lower quality when it was created by a company perceived as larger versus smaller ($M_{larger} = 4.30$, SD = .93; $M_{smaller} = 4.78$, SD = 1.10; $t(435) = 5.00$, $p < .001$, $d = .48$). Participants also inferred that the employees

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3 At the end of the experiment, participants also completed an attention check in which they were asked to indicate the name of the company that they had read about (1 = FoodCo, 2 = BakedWell, 3 = GoodFood, 4 = Don’t remember). Seven participants responded incorrectly to the attention check. The results excluding these participants revealed results with the same significance and pattern as those detailed above.
working at the company that they perceived as larger were less intrinsically motivated (\(M_{\text{larger}} = 4.32, \ SD = 1.16; \ M_{\text{smaller}} = 5.44, \ SD = 1.11; \ t(435) = 10.34, \ p < .001, \ d = .99\))\(^4\) and devoted less effort to doing the best work that they could do (\(M_{\text{larger}} = 4.86, \ SD = 1.17; \ M_{\text{smaller}} = 5.94, \ SD = 1.00; \ t(435) = 10.44, \ p < .001, \ d = 1.00\)).

As detailed above, we predict that consumers judge employees working at larger (vs. smaller) companies as less intrinsically motivated, and therefore as less likely to invest effort into their work, which decreases perceptions of quality. We accordingly tested for serial mediation (Hayes PROCESS model 6; 10,000 bootstrap samples, random seed), which revealed a significant indirect effect, \(B_{\text{indirect}} = -.12, \ SE = .06, \ 95\% \ CI = [-.23; -.01]\) (Figure WD3).

**FIGURE WD3: SERIAL MEDIATION**

![Diagram showing serial mediation with company size affecting perceived employee intrinsic motivation, which in turn affects perceived employee effort, which finally affects quality evaluations.]

Notes. The path coefficients are unstandardized betas. **\(p = .01\), ***\(p < .001\).

Overall, the empirics in Supplemental Study 3 reveal that the reason why intrinsic motivation perceptions increase quality evaluations is because consumers infer that more intrinsically motivated employees devote more effort to their work, and it is this perception of greater effort that leads consumers to infer that more intrinsically motivated employees produce higher quality products. Of note, our empirics also indicate that the intrinsic motivation lay theory shapes quality evaluations even when products are machine made (Study 2); in such cases, consumers may anticipate that employee effort is still required to ensure that these machines are properly maintained as well as to quality check the machine made products (Okwuobi et al. 2018).

Web Appendix D4

**Supplemental Study 4: Conceptual replication of Study 5**

This supplemental study conceptually replicates Study 5 and distinguishes metrics of company size from market share (i.e., the share of consumers who use an offering; Hellofs and Jacobson 1999). Greater market share can have positive outcomes for consumers (i.e., in situations in which it is better to have many users, such as when consumers seek social proof), as well as negative outcomes (i.e., in situations in which it is better to have fewer users, such as when consumers seek uniqueness; Hellofs and Jacobson 1999). Although market share and company size are often correlated, they are distinct (Hydock, Paharia, and Blair 2020; Peng and

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\(^4\) The path in Figure WD3 from company size to perceived employee intrinsic motivation captures the intrinsic motivation lay theory (i.e., the lay theory that employees at larger companies are less intrinsically motivated).
To further hone in on our proposed effect, we thus held all companies’ market share for the focal product constant and varied only metrics of their size by allowing for both companies to sell products beyond wallets (i.e., both companies thus had the same wallet market share, while having different overall company sizes due to other products in their portfolio).

Method

We pre-registered this study (aspredicted.org/BSZ_WLW) and recruited 201 MTurk workers. Participants needed to pass an attention check to enter the study. Also as pre-registered, we excluded participants who failed an attention check at the end of the study, leaving 164 participants ($M_{age} = 44.44, SD = 14.29; 54.9\%$ female).

We randomly assigned participants to one condition in a 2 (product type: low-tech vs. high-tech) between-subjects design. All participants made a choice between two wallet options produced by two different companies, Wallet Now and Wallet Co. In the low-tech condition, both options were standard wallets. In the high-tech condition, both options were smart wallets. In both conditions, this choice was incentive-compatible; participants learned they should choose the option they wanted as they would be entered into a lottery to win their chosen wallet.

Participants in both conditions also learned that the wallets produced by these companies were made of synthetic leather, had a patented design, and were certified as authentic (e.g., were not counterfeit); this information controlled for the naturalness of the material (Scekic and Krishna 2021) and the product’s uniqueness (Moreau et al. 2020). Participants further learned that employees at both companies were equally friendly to customers and had the same average number of years of education and work experience, controlling for perceived employee warmth and competence (Yang and Aggarwal 2019). In addition, we controlled for perceptions of market share (Hellofs and Jacobson 1999) by highlighting that both companies sold the same number of wallets (500) at the same price, thereby allowing us to hold market share constant while still varying company size (i.e., company size varied across the two companies because they differed in their total company revenue across all products and in their total employees).

Participants further learned that these companies would create the same number of wallets for the foreseeable future (given that manufacturing constraints would prevent the companies from creating more wallets than they already do and that there are already pre-orders for each of the wallets that these companies will make for the foreseeable future). Participants also learned that both companies were located in Switzerland. This latter information ensured that our manipulation affected the companies’ perceived size, rather than our American participants’ perceptions of whether the companies were local (Gao, Zhang, and Mittal 2017). All participants then viewed (ostensibly-real) Facebook posts from each company that included metrics of its company’s size (see Figures WD4-WD5): The larger company had more employees and a larger revenue than the smaller company (we counterbalanced pairing company name with size metrics).
After viewing this information, we asked participants, “Which company would you prefer a wallet from?” with the choice of either Wallet Now or Wallet Co. This choice was incentive-compatible; at the end of the study, one participant received a bonus credited to their account to make their wallet purchase. Participants next completed an attention check, which asked them to specify the product category that characterized the product options they viewed; we used this attention check to carry out our pre-registered exclusions.

Results

As predicted, significantly more participants chose the wallet created by the smaller company in the low-tech (68.5%) versus high-tech condition (38.5%; $\chi^2(1, N = 164) = 14.63, p < .001, \phi = .30$). Further, binomial tests within each condition revealed that significantly more participants in the low-tech condition chose the wallet created by the smaller (vs. larger) company ($z = 3.04, p = .002$), whereas significantly more participants in the high-tech condition chose the wallet created by the larger (vs. smaller) company ($z = 2.10, p = .036$).
WEB APPENDIX E: SAMPLE SIZE AND POWER ANALYSIS DETAILS

Here we detail how we determined each study’s sample size. In addition, we detail each study’s observed effect size and observed power (Meyvis and Van Osselaer 2018), and we also conduct a sensitivity power analysis for each study (i.e., the minimum detectable effect size based on each study’s sample size and statistical power of 80%). All sample sizes were pre-determined to recruit at least 100-150 participants per cell prior to pre-registered exclusions to ensure sufficient power to reliably detect effect sizes in consumer psychological studies (Brysbaert 2019); data in each study were not analyzed prior to the collection of the full pre-determined sample size, and sample sizes were therefore not altered based on intermittent data analysis. We pre-registered these sample sizes in Studies 2, 3, 4b, 5, and 6. Studies 2-3 recruited 150 participants per cell. Studies 4a, 4b, 5, and 6 recruited 100 participants per cell. We also pre-registered the primary data collection in Study 1, which is mainly a secondary data study (i.e., we recruited 240 participants to rate 20 companies so that each of the 480 companies in Study 1 was rated by multiple participants), and we additionally pre-registered our analysis plan of these primary data as well as the secondary data included in that study.

### TABLE WE1: SAMPLE SIZE AND POWER ANALYSIS DETAILS

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<th>Sample Size (after any pre-registered exclusions)</th>
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<td>ηₚ² = .06 (interaction)</td>
<td>.05</td>
<td>99.9%</td>
<td>ηₚ² = .02</td>
</tr>
<tr>
<td>3*</td>
<td>554</td>
<td>ηₚ² = .06 (interaction)</td>
<td>.05</td>
<td>99.9%</td>
<td>ηₚ² = .02</td>
</tr>
<tr>
<td>4a</td>
<td>489 (smaller-baseline = 96; larger-baseline = 100)</td>
<td>d = .58</td>
<td>.05</td>
<td>98.1%</td>
<td>d = .40</td>
</tr>
<tr>
<td>4b*</td>
<td>512 (smaller company = 104; larger company = 106)</td>
<td>d = .75</td>
<td>.05</td>
<td>99.9%</td>
<td>d = .39</td>
</tr>
<tr>
<td>5*</td>
<td>191</td>
<td>φ = .33</td>
<td>.05</td>
<td>99.5%</td>
<td>φ = .20</td>
</tr>
<tr>
<td>6*</td>
<td>208</td>
<td>φ = .19</td>
<td>.05</td>
<td>78.2%</td>
<td>φ = .19</td>
</tr>
</tbody>
</table>

*Sample size pre-registered.
WEB APPENDIX F: STIMULI AND ADDITIONAL ANALYSES FOR STUDIES 1-6

Web Appendix F1

Study 1 additional analyses

Web Appendix F1 details a robustness check that includes control variables in the analysis of Study 1.

In an exploratory (i.e., non-preregistered) analysis, we conducted a robustness check to control for covariates when examining the interaction between company size and industry type on Net Promoter Score (NPS). This analysis included a continuous variable for company age and dummy variables for company type (dummy 1: 1 = B2C, 0 = otherwise; dummy 2: 1 = B2B, 0 = otherwise [as some company types were coded by a research assistant as both B2B and B2C]). Our results are robust to the inclusion of these control variables in the analysis. Specifically, a regression of NPS on company size × industry type, including these covariates, again revealed a significant interaction ($B = 1.89, SE = .52, t(473) = 3.63, p < .001$). A floodlight analysis (Spiller et al. 2013) revealed two Johnson-Neyman points supporting our prediction. Larger (vs. smaller) companies were associated with lower NPS when perceived as being in a relatively lower-tech industry ($JN \leq 2.01$), but higher NPS when perceived as being in a relatively higher-tech industry ($JN \geq 3.64$).

Web Appendix F2

Study 2 stimuli and additional analyses

Web Appendix F2 details the company names that participants viewed in Study 2 (Table WF1), as well as analysis of the manipulation check administered in Study 2.

<table>
<thead>
<tr>
<th>Product</th>
<th>Company Names in the Low-Tech Condition</th>
<th>Company Names in the High-Tech Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>WoodWork</td>
<td>RoboTech</td>
</tr>
<tr>
<td></td>
<td>GoodCrafts</td>
<td>ChairRobotic</td>
</tr>
<tr>
<td></td>
<td>*FurnitureCo</td>
<td>*TechnologyChair</td>
</tr>
<tr>
<td>Blanket</td>
<td>Throws'n'Things</td>
<td>HeatTech</td>
</tr>
<tr>
<td></td>
<td>123Blanket</td>
<td>ElectroHeat</td>
</tr>
<tr>
<td></td>
<td>*BlanketCo</td>
<td>*SmartThrowCo</td>
</tr>
<tr>
<td>Soap</td>
<td>SudsExpress</td>
<td>InductionDevice</td>
</tr>
<tr>
<td></td>
<td>TopSoap</td>
<td>TechMed</td>
</tr>
<tr>
<td></td>
<td>*BathGoods</td>
<td>*AdvancedHygiene</td>
</tr>
<tr>
<td>Meat</td>
<td>BurgerBizz</td>
<td>InVitro</td>
</tr>
<tr>
<td></td>
<td>MeatMade</td>
<td>TechFood</td>
</tr>
<tr>
<td></td>
<td>*FoodCo</td>
<td>*FoodVitro</td>
</tr>
</tbody>
</table>

Note. Asterisks indicate the focal company (i.e., the company that produced the product whose quality participants evaluated).
**Study 2 manipulation check**

We included the following question at the end of Study 2, which was a manipulation check for the company size manipulation: “What size were the companies that you evaluated in this study?” (1 = Relatively smaller companies; 7 = Relatively bigger companies). Participants in the larger frame condition indeed perceived the companies they evaluated as larger ($M = 3.56$, $SD = 2.07$) than participants in the smaller frame condition ($M = 3.23$, $SD = 1.96$; $t(599) = 1.99$, $p = .047$, $d = .16$).

Web Appendix F3

**Study 3 stimuli**

Web Appendix F3 details Study 3’s company size manipulation in the low-tech conditions (Table WF2) and the high-tech conditions (Table WF3).

**TABLE WF2: THE COMPANY SIZE MANIPULATION IN THE LOW-TECH CONDITIONS IN STUDY 3**

<table>
<thead>
<tr>
<th>Low-Tech</th>
<th>Low-Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smaller Frame Condition</td>
<td>Larger Frame Condition</td>
</tr>
<tr>
<td>Throws’n’T Things: $90.8$ billion in revenue; 754,987 employees</td>
<td>Throws’n’T Things: $40,000 in revenue; 8 employees</td>
</tr>
<tr>
<td>123Blanket: $92.89$ billion in revenue; 761,981 employees</td>
<td>123Blanket: $58,000 in revenue; 9 employees</td>
</tr>
<tr>
<td>*BlanketCo: $1.4$ million in revenue; 63 employees</td>
<td>*BlanketCo: $1.4$ million in revenue; 63 employees</td>
</tr>
</tbody>
</table>

*Note. Asterisks indicate the focal company (i.e., the company that produced the product whose quality participants evaluated). The size manipulation in the low-tech conditions and the high-tech conditions was identical, except for the names assigned to the companies (which were designed to reflect the low-tech vs. high-tech nature of the companies’ products, respectively).*

**TABLE WF3: THE COMPANY SIZE MANIPULATION IN THE HIGH-TECH CONDITIONS IN STUDY 3**

<table>
<thead>
<tr>
<th>High-Tech</th>
<th>High-Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smaller Frame Condition</td>
<td>Larger Frame Condition</td>
</tr>
<tr>
<td>HeatTech: $90.8$ billion in revenue; 754,987 employees</td>
<td>HeatTech: $40,000 in revenue; 8 employees</td>
</tr>
<tr>
<td>ElectroHeat: $92.89$ billion in revenue; 761,981 employees</td>
<td>ElectroHeat: $58,000 in revenue; 9 employees</td>
</tr>
<tr>
<td>*SmartBlanketCo: $1.4$ million in revenue; 63 employees</td>
<td>*SmartBlanketCo: $1.4$ million in revenue; 63 employees</td>
</tr>
</tbody>
</table>

*Note. Asterisks indicate the focal company (i.e., the company that produced the product whose quality participants evaluated). The size manipulation in the low-tech conditions and the high-tech conditions was identical, except for the names assigned to the companies (which were designed to reflect the low-tech vs. high-tech nature of the companies’ products, respectively).*

Web Appendix F4

**Study 4a stimuli**

Web Appendix F4 details Study 4a’s intervention stimuli in the larger-intrinsic condition (i.e., in which participants encountered information revealing that the larger company’s employees had high intrinsic motivation; Figure WF1), and the smaller-intrinsic condition (i.e., in which participants encountered information revealing that the smaller company’s employees had low intrinsic motivation; Figure WF2).
FIGURE WF1: LARGER-INTERVENTION CONDITION (EMPLOYEES MORE INTRINSICALLY MOTIVATED)

What our employees say about us

Anonymous2 — Posted June 2 at 4:32pm

At Home Goods, I finally found a job that allows me to do work that I feel good about. I absolutely love my job. Before coming to Home Goods, I tried working at a lot of different companies to find one where I feel good about the work I am asked to do; but I never felt that way at the other companies that I worked at.

When I heard from Home Goods’ employees that Home Goods allows them to do work that they feel good about, I honestly didn’t believe it. But I’ve been working at Home Goods for a while now, and it’s true — I’m so thankful that I’m finally able to do work that I feel good about!

Being able to do work I feel good about is amazing. This is the only job I’ve ever felt this way about — I FIND A LOT OF MEANING IN MY WORK AT HOME GOODS, AND I LOVE IT.

FIGURE WF2: SMALLER-INTERVENTION CONDITION (EMPLOYEES LESS INTRINSICALLY MOTIVATED)

What our employees say about us

Anonymous2 — Posted June 2 at 4:32pm

At Home Goods, I finally found a job that requires me to do work that I feel terrible about. I absolutely hate my job. Before coming to Home Goods, I tried working at a lot of different companies to find one where I feel good about the work I am asked to do; and I never felt that way at the other companies that I worked at.

When I heard from Home Goods’ employees that Home Goods requires them to do work that they feel terrible about, I honestly didn’t believe it. I’ve been working at Home Goods for a while now, and it’s true — I’m so angry that I’m doing work that I feel terrible about!

Doing work that I feel terrible about is awful. This is the only job I’ve ever felt this way about — I FIND ZERO MEANING IN MY WORK AT HOME GOODS, AND I HATE IT.

Web Appendix F5

Study 4b stimuli

Web Appendix F5 details Study 4b’s intervention stimuli in the smaller-intervention condition (i.e., in which participants encountered information revealing that the smaller company devoted a lot of money to R&D; Figure WF3), and the larger-intervention condition (i.e., in which participants encountered information revealing that the larger company devoted little money to R&D; Figure WF4).
FIGURE WF3: SMALLER-INTERVENTION CONDITION (HIGH R&D SPENDING)

Web Appendix F6

Study 5 stimuli

Web Appendix F6 details the “About Us” webpages utilized in Study 5. The “About Us” webpages were counterbalanced, such that participants were randomly assigned to view webpages revealing either that Coffee Now was a larger company than Coffee Co (Figure WF5), or that Coffee Co was a larger company than Coffee Now (Figure WF6).

FIGURE WF5: “ABOUT US” WEBPAGES REVEALING THAT COFFEE NOW (VS. COFFEE CO) IS A LARGER COMPANY
Web Appendix F7

Study 6 stimuli

Web Appendix F7 details the subtle low-tech versus high-tech framing manipulation utilized in Study 6 (Figure WF7), along with the Facebook posts detailing information about company size. The Facebook posts were counterbalanced, such that participants were randomly assigned to view posts revealing either that HomeCo was a larger company than HomeStore (Figure WF8), or that HomeStore was a larger company than HomeCo (Figure WF9).

FIGURE WF7: SUBTLE LOW-TECH VERSUS HIGH-TECH FRAMING MANIPULATION IN STUDY 6

Low-Tech Framing Condition

Please view some details about the pen below:

Wooden Pen
- Made of wood
- Customizable wording on surface
- Laser carved
- Multiple size options

A lot of care and consideration is required for a wooden pen to function. This pen has been around for a while; it requires conscientious attention to detail to make. To function properly, this type of wooden pen requires traditional approaches to remove wood and create its functionalities. It is sold in home goods stores in the wooden product section.

High-Tech Framing Condition

Please view some details about the pen below:

High-Tech Laser-Carved Pen
- Laser carved
- Multiple size options
- Made of wood
- Customizable wording on surface

A lot of highly technologically-advanced laser-oriented care and consideration is required for a laser-built pen to function. This pen is brand new; it requires conscientious attention to cutting-edge nanotechnological detail to make, relying on the usage of quantum mechanical properties of nano-electronics and advanced laser technology enabled detail. To function properly, this type of high-tech laser-built pen requires new robotic and laser engineering technology to remove wood and create its functionalities. It is sold in high-tech home goods stores in the cutting-edge technology section.
FIGURE WF8: FACEBOOK POSTS REVEALING THAT HOMECO (VS. HOMESTORE) IS A LARGER COMPANY

HomeCo

We have 600 employees and $17.1 million in revenue, and we were founded in 2002. These 600 employees make all of our pens in Switzerland, which is the home of our company. Our employees are what make our company great. We have the best pens — you can count on it... See More

HomeStore

We were founded in 2002, and we have 21 employees and $0.6 million in revenue. These 21 employees are the heart of our company, and make all of our pens in Switzerland (which is where our company is located). You can count on us to bring you the best pens... See More

FIGURE WF9: FACEBOOK POSTS REVEALING THAT HOMESTORE (VS. HOMECO) IS A LARGER COMPANY

HomeStore

We have 600 employees and $17.1 million in revenue, and we were founded in 2002. These 600 employees make all of our pens in Switzerland, which is the home of our company. Our employees are what make our company great. We have the best pens — you can count on it... See More

HomeCo

We were founded in 2002, and we have 21 employees and $0.6 million in revenue. These 21 employees are the heart of our company, and make all of our pens in Switzerland (which is where our company is located). You can count on us to bring you the best pens... See More
### WEB APPENDIX G: EXAMPLES OF FINDINGS FROM THE LITERATURE EXAMINING DRIVERS OF QUALITY EVALUATIONS

#### TABLE WG1: EXAMPLES OF FINDINGS FROM THE LITERATURE EXAMINING DRIVERS OF QUALITY EVALUATIONS

<table>
<thead>
<tr>
<th>Drivers of Quality Evaluations</th>
<th>Sample Findings</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role of Company Size</td>
<td>Some investigations find that larger companies are evaluated as producing higher quality products; other investigations find the opposite</td>
<td>See Table 1 in the main text for a detailed overview</td>
</tr>
<tr>
<td>Role of Production Logistics</td>
<td>Making a product by hand can increase product quality evaluations</td>
<td>Fuchs, Schreier, and Van Osselaer (2015); Letzel, Rausch, and Schubert (2020); Schroll, Schmurr, and Grewal (2018)</td>
</tr>
<tr>
<td></td>
<td>The location in which a product is manufactured can shape product quality evaluations</td>
<td>Bilkey and Nes (1982); Maheswaran (1994); Newman and Dhar (2014); Newman, Dhar, and Gorlin (2016); Obermiller and Spangenberg (1989); Peterson and Jolibert (1995); van Ooijen et al. (2017); Zhang (1997)</td>
</tr>
<tr>
<td>Role of Product Composition</td>
<td>Product sensory cues (e.g., auditory cues, color, smell, and flavor) and hedonic attributes can shape quality product evaluations</td>
<td>(Altinsoy 2012; Compeau, Grewal, and Monroe 1998; Cowen-Elstner 2018; Leclerc, Schmitt, and Dubé 1994; Ordabayeva and Srinivasan 2019; Zampini and Spence 2004)</td>
</tr>
<tr>
<td></td>
<td>Number and types of features (e.g., add-on features, alignable features, etc.) within the product can shape product quality evaluations</td>
<td>(Anderson 2015; Bertini, Ofek, and Ariely 2009; Stylidis, Wickman, and Söderberg 2015)</td>
</tr>
<tr>
<td></td>
<td>Green enhancements to a product can shape product quality evaluations</td>
<td>(Gleim et al. 2013; Newman and Dhar 2014; Newman, Dhar, and Gorlin 2016; van Doorn, Verhoef, and Risselada 2020)</td>
</tr>
<tr>
<td>Role of Packaging</td>
<td>Product packaging that is smaller in size can increase product quality evaluations</td>
<td>(Shirai 2020; Yan, Sengupta, and Wyer Jr. 2014)</td>
</tr>
<tr>
<td></td>
<td>Transparent packaging can increase product quality evaluations</td>
<td>(Chandran, Batra, and Lawrence n.d.; Sabri et al. 2020; Simmonds and Spence 2017)</td>
</tr>
<tr>
<td>Role of Price</td>
<td>Higher prices can increase product quality evaluations</td>
<td>(Rao and Monroe 1989; Völckner and Hofmann 2007; Yang et al. 2019)</td>
</tr>
<tr>
<td></td>
<td>Discounts can decrease product quality evaluations</td>
<td>(Chae 2020; Raghubir 2004; Raghubir and Corfman 1999)</td>
</tr>
<tr>
<td>Role of Branding</td>
<td>Brand alliances can increase product quality evaluations</td>
<td>(Fang and Mishra 2002; Rao, Qu, and Ruekert 1999; Rao and Ruekert 1994; Voss and Gammoh 2004; Voss and Tansuhaj 1999; Washburn, Till, and Priluck 2000)</td>
</tr>
<tr>
<td></td>
<td>Brand personality (e.g., exciting brands) can increase product quality evaluations</td>
<td>(Clemenz and Brettel 2015; Clemenz, Brettel, and Moeller 2012; Parks 2018; Ramaseshan and Tsa 2007)</td>
</tr>
<tr>
<td>Role of Advertising</td>
<td>Greater advertising spending can increase product quality evaluations</td>
<td>(Erdem, Keane, and Sun 2008; Kirmani 1990, 1997; Kirmani and Wright 1989; Moorthy and Hawkins 2005; Moorthy and Zhao 2000)</td>
</tr>
<tr>
<td></td>
<td>Personalized advertising can increase product quality evaluations</td>
<td>(Shanahan, Tran, and Taylor 2019; Tran et al. 2020)</td>
</tr>
<tr>
<td>Role of User/Endorser</td>
<td>The number of users and endorsers can shape product quality evaluations</td>
<td>(Filieri et al. 2018; Helllofs and Jacobson 1999; Kim and Min 2014; Lynn et al. 2016; Parker and Lehmann 2011)</td>
</tr>
<tr>
<td></td>
<td>The types of users and endorsers (e.g., famous endorsers) can shape product quality evaluations</td>
<td>(Busler 2002; Dean 1999; Dean and Biswas 2013; Dikćius and Ilicikuine 2021; Feng, Wang, and Peracchio 2008)</td>
</tr>
<tr>
<td>Role of Recommendations</td>
<td>Non-numeric content in reviews (e.g., the emotional content in reviews) can shape product quality evaluations</td>
<td>(Kim and Ahn 2016; Wang et al. 2019)</td>
</tr>
<tr>
<td></td>
<td>Numeric content in reviews (e.g., product star rating) can shape product quality evaluations</td>
<td>(de Langhe, Fernbach, and Lichtenstein 2016; Etumnu et al. 2020; Flanagan et al. 2014; Shen, Li, and DeMoss 2012)</td>
</tr>
</tbody>
</table>

*Note: The table features papers that documented antecedents that significantly altered quality evaluations. Papers that did not directly measure quality evaluations or that did not find significant effects on quality evaluations (e.g., Reich, Kupor, and Smith 2018, which measured preference rather than quality evaluations) are omitted. The first row in this table reflects an investigation of the antecedents of quality evaluations that is expanded upon in Table 1 in the main text.*
WEB APPENDIX H: EXAMPLES OF FINDINGS FROM THE LITERATURE EXAMINING THE EFFECT OF MARKET SHARE AND TOP DOG STATUS ON QUALITY EVALUATIONS

We review the literature examining the effect of company size on quality evaluations (in Table 1 in the main text) separately from the literature examining the effect of other company-related constructs (in Web Appendix H: market share [Table WH1] and top dog status [Table WH2]). This is because although these constructs can be correlated, prior research has found that they are conceptually and empirically distinct (e.g., company size vs. market share: Hydock, Paharia, and Blair 2020; McDougall and Oviatt 1996; Peng and Luo 2000; company size vs. top dog status: Avery et al. 2010; Paharia et al. 2011). Regarding the distinction between company size versus market share, see also Supplemental Study 4 (in Web Appendix D4).

**TABLE WH1: THE RELATIONSHIP BETWEEN MARKET SHARE AND QUALITY EVALUATIONS**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Smaller Market Share Predicts Higher Quality Evaluations</th>
<th>Larger Market Share Predicts Higher Quality Evaluations</th>
<th>No Relationship Between Market Share and Quality Evaluations</th>
<th>Main Finding &amp; Mechanism Underlying Quality Evaluations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beck, Rahinel, and Bleier (2020)</td>
<td>✓</td>
<td></td>
<td></td>
<td>A company with a smaller market share is perceived as producing higher quality. Does not focus on market share mechanism: In this research, the advantage of smaller market share emerged in the specific case in which participants judged that Wendy's (i.e., the smaller market share company) had higher product quality than McDonald's (i.e., the larger market share company). Thus, this phenomenon may be due to brand specific knowledge.</td>
</tr>
<tr>
<td>Caminal and Vives (1996); Das, Spence, and Agarwal (2021); He and Opeewal (2018); Kim and Min (2014); van Herpen, Pieters, and Zeelenberg (2009)</td>
<td></td>
<td>✓</td>
<td></td>
<td>Companies with larger market shares are perceived as producing higher quality. Theorized mechanisms include the possibility that: (1) people apply a lay belief that greater product popularity (i.e., greater sales volume) signals higher quality, (2) a conformity goal causes people to perceive more popular products as higher quality.</td>
</tr>
<tr>
<td>Hellofs and Jacobson (1999)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>Companies with larger market shares are sometimes perceived as producing higher or lower quality. This is because greater market share can yield positive outcomes for consumers when they benefit from a more popular product (e.g., when consumers seek social proof), but yield negative outcomes for consumers when they benefit from a less popular product (e.g., when consumers seek exclusivity).</td>
</tr>
<tr>
<td>Hydock, Paharia, and Blair (2020)</td>
<td></td>
<td></td>
<td>✓</td>
<td>No effect on quality evaluations occurs when firms are the same size but have different market shares.</td>
</tr>
<tr>
<td>Kamins and Alpert (2004)</td>
<td></td>
<td></td>
<td>✓</td>
<td>A company’s claim of greater market share (rather than information about market share from an independent outside source) has no effect on quality evaluations. It is theorized that this null effect occurs because consumers may not place credence in a company’s self-professed claim of market share.</td>
</tr>
<tr>
<td>Steinhart et al. (2014); Ziano and Pandelaere (2018)</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>Companies with larger market shares are perceived as higher quality in the context of utilitarian products, but not hedonic or self-expressive products. It is theorized that this is because consumers apply the lay belief that more popular products must be higher quality for utilitarian products, but not for hedonic products or self-expressive products.</td>
</tr>
<tr>
<td>Lu et al. (2020)</td>
<td></td>
<td></td>
<td>✓</td>
<td>Orange juice manufactured and packaged by a grocery chain (i.e., a company with smaller market share) versus a national manufacturer (i.e., a company with larger market share) is perceived to be of equivalent quality. Does not focus on market share mechanism.</td>
</tr>
</tbody>
</table>
TABLE WH2: RELATIONSHIP BETWEEN TOP DOG STATUS AND QUALITY EVALUATIONS

<table>
<thead>
<tr>
<th>Authors</th>
<th>Underdog Status Predicts Higher Quality Evaluations</th>
<th>Top Dog Status Predicts Higher Quality Evaluations</th>
<th>No Effect of Underdog vs. Top Dog Status on Quality Evaluations</th>
<th>Main Effect &amp; Mechanism Underlying Quality Evaluations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jin and Huang (2017); Nguyen (2017); Tang and Tsang (2020)</td>
<td>✓</td>
<td></td>
<td></td>
<td>The authors theorize and find that an underdog (vs. top dog) status has no effect on quality evaluations.</td>
</tr>
</tbody>
</table>

The authors theorize and find that an underdog (vs. top dog) status has no effect on quality evaluations.
REFERENCES FOR WEB APPENDIX


