Corporate Social Counterpositioning:

How Attributes of Social Issues Influence Competitive Response

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Abstract

We develop a theory of how firms respond to each other's CSR activities. We contend that whether a firm will emulate, ignore, or oppose a rival's CSR efforts depends on attributes of the underlying social issue, the level of market competition, and the substantiveness of CSR. We develop a formal model of CSR as a function of these factors, allowing, in particular, for issues to be socially polarizing. The model predicts several distinct equilibrium outcomes, including the potential for counterpositioning, whereby rival firms mutually boost their profits by taking opposing positions on a social issue. The model shows that such counterpositioning is more likely when issue salience is high but agreement is low, when markets are highly competitive, or when CSR is largely symbolic. (124 words)

Keywords: mathematical modelling, corporate social responsibility, social positioning, differentiation, polarization

Introduction

Strategy scholarship increasingly recognizes corporate social responsibility (CSR)—i.e., the voluntary adoption of practices that promote social or environmental sustainability—as a source of competitive advantage (Henisz et al., 2014; Dorobantu et al. 2017). Building on the economics literature on the private provision of public goods (Bergstrom, Blume & Varian, 1986), a body of theoretical work has made a strategic case for CSR[1] (McWilliams & Siegel, 2001; Kitzmueller & Shimshack, 2012; Kaul & Luo, 2018), arguing that the pursuit of CSR enables firms to appeal to stakeholders who value their prosocial activities (Arora & Gangopadhyay, 1995; Kotchen, 2006; Besley & Ghatak, 2007) while also appeasing activists concerned with firms' irresponsible actions (Baron, 2001; 2009; Godfrey, 2005), thus giving socially responsible firms a competitive advantage (Bagnoli & Watts, 2003). A growing body of empirical work shows that firms that invest in CSR may be rewarded by key stakeholders—including customers (Sen & Bhattacharya, 2001; Elfenbein & McManus, 2010; Fosfuri et al., 2015; Lev et al. 2010), employees (Burbano 2016; Carnahan et al., 2017), and investors (Mackey et al., 2007, Cheng et al., 2014)—and protected against attacks by activists (Godfrey, Merrill, & Hansen, 2009; Luo et al., 2018; Jia, Gao, & Julian, 2020). Empirical work also confirms that the pursuit of CSR is often beneficial for firm financial performance (Henisz et al., 2014; Flammer, 2015b).

This strategic view of CSR stands in contrast to the institutional perspective in sociology, which sees CSR efforts as a response to the normative pressure firms face from their community peers (Marquis, Glynn, & Davis, 1997; Tilcsik & Marquis, 2013) and from social movements (McDonnell and King, 2013; McDonell, King, & Soule, 2015). While both perspectives offer a reason for firms to invest in CSR, they differ in their predictions of how a firm's *rivals* will respond

[1] Some of this work also examines whether and under what conditions CSR is preferable to other forms of provision, though that is not our focus in this paper.

to these CSR efforts. If CSR is driven by normative pressures, a firm's adoption of CSR practices should make it more likely that its peers will also invest in CSR, if only to avoid being seen as illegitimate (Marquis et al., 2007). Consistent with this, researchers have studied the diffusion of CSR practices, seeking to understand the conditions under which such practices do or do not diffuse (Briscoe et al., 2015; Briscoe & Gupta, 2016). In contrast, economic models generally predict a separating equilibrium, where investments in CSR by one firm effectively forestall similar investments by their rivals, so that some firms pursue CSR while others stay neutral (Arora & Gangopadhyay, 1995; Bagnoli & Watts, 2003; Besley & Ghatak, 2007; Baron, 2009; Kaul & Luo, 2018). Indeed, this would seem to be a prerequisite for CSR to result in competitive advantage; widely pursued CSR practices could not be a source of differentiation (Gupta et al., 2020).

In this paper, we develop a theory of the competitive response to CSR—seeking to understand the conditions under which a firm's rivals will follow, ignore, or oppose a firm's CSR efforts, or how this reaction will influence a firm's choice to undertake CSR in the first place—as a function of the nature of the social issue being addressed. Our point of departure from existing theory, which treats CSR efforts as unambigiously good, is to recognize that many social issues are hotly contested, with actions that are supported by one section of society being actively opposed by another (Meyer & Rowan, 1977; Meyer & Hollerer, 2010). Unlike prior models where stakeholders derive utility from firms' CSR efforts or are indifferent to them (Bagnoli & Watts, 2003; Besley & Ghatak, 2007; Kitzmueller & Shimshack, 2012), we allow for the possibility that some subset of stakeholders may experience disutility from firms' CSR, and may boycott the firm in protest (Burbano, 2020). Further, such polarization may drive rivals to react by adopting a practice or a stand opposite to that of the focal firm (Werner, 2017; Vaaler & Waldfogel, 2019): examples of such divergence can be seen in growing corporate support for agencies that deny climate change (Dunlap et al., 2016) and groups that oppose equal rights legislation (HRC Equity Index, 2013).

This key change in assumptions has important implications for the effect of CSR on competition between a firm and its rivals. First, a firm that takes a stand on a social issue, even if that stand is purely symbolic (i.e., has no impact on its operating costs), incurs an opportunity cost of lost sales to those who oppose its stand. In contrast to prior work (Kotchen, 2006; Baron, 2009) where at least one firm will pursue CSR so long as some consumers are willing to pay for it, issue polarization means that all firms may stay neutral for fear of offending (and losing sales from) those who hold the minority view. Only if the majority's support for the issue is strong enough that the price premium from supporters is greater than the lost sales to opponents, will a firm take even a symbolic stand in support of an issue.

Second, firms that stay neutral now benefit from greater market power over stakeholders who are opposed to the position taken by the firm pursuing CSR. Such firms may be able to raise their prices and profits when their rivals undertake CSR, and this may hold even if most stakeholders support the CSR effort (in contrast to Baron, 2009, where profit-maximizing firms would never support a minority position). In fact, in some cases, it may be more profitable for the firm to stay neutral than to pursue CSR in support of a majority position, which may lead to a competitive outcome where neither firm pursues CSR even though both firms would be better off if one firm did. Moreover, the increased market power of the neutral firm in this case means that the likelihood of firms' pursuing CSR will increase with the level of product market competition, in contrast to prior work on the effect of competition on CSR adoption (Bagnoli & Watts, 2003), but consistent with recent evidence (Fernandez-Kranz & Santalo 2010; Flammer, 2015a). CSR on contested issues effectively fragments the market, generating market power for both firms that is more valuable, the more competitive the market is in the absence of CSR.

Third, allowing for issues to be contested opens up the possibility that a firm responds to rival CSR by taking a stand opposite to that of its rival. CSR can produce a counterpositioning

equilibrium, wherein both firms pursue CSR, albeit on opposite sides of the issue. Both firms achieve higher prices and profits, because they now interact with non-overlapping consumer groups and capture more value as a result of their new-found monopoly positions. Not only does our theory suggest the possibility of a new kind of separating equilibrium relative to prior work on CSR (Besley & Ghatak, 2007; Baron, 2009), it highlights the fact that (profitable) CSR efforts in support of a minority position may only be feasible in the presence of CSR efforts in support of the majority position. In other words, firms' investments in CSR on contested issues may create new profit opportunities for their rivals, in some cases driving them to take opposing stands for minority positions they would not otherwise have supported.

We formalize these implications using a differentiated duopoly model (Baron, 2001; Zanchettin, 2006; Kaul and Luo, 2018) of two firms competing in a product market, each of which has the option of taking a stand for (the majority position on) a social issue, taking a stand against it, or staying neutral. Using the model, we map out four distinct equilibrium cases as a function of two attributes of the issue—its salience (i.e., how much consumers care) and agreement (i.e., how much consumers share the same position on the issue)—fleshing these out with miniature case studies for each type of issue. The model shows that as agreement on an issue declines, the salience required to motivate firms to take even a purely symbolic stand in support of it increases, with no firms taking a stand for low-salience issues, and only one firm taking a stand for moderately salient issues. The model also shows the emergence of a counter-positioning equilibrium for issues with high salience and low agreement. Further, a firm's decision to take a stand for the majority position always increases its rival's profits as well, and only results in a competitive advantage for a focal firm if its rival either stays neutral or takes an opposing stand. Supplementary comparative static analyses show that the counterpositioning case is less likely, the lower the level of product market competition, the intuition being that additional differentiation from taking opposing stands on a social issue adds little

value to firms that are already differentiated in terms of their product offerings. Supplementary analyses show that the salience required for firms to undertake CSR is higher, the higher the direct cost of such activity, suggesting that counterpositioning may be more likely when pursuing symbolic actions rather than substantive changes to firms' internal operations. These findings imply a range of novel empirical predictions, summarized later in Table 3.

Our paper makes several contributions to the literature. First, we extend our understanding of the economics of CSR by incorporating the possibility that those who do not support the provision of a social good may not simply be indifferent to it but may be actively opposed to it (Burbano, 2020). In showing how disagreement on what is 'good' may lead to very different competitive outcomes, we shift the emphasis from differences between firms to differences between issues. We specify two key issue attributes—salience and agreement—that produce divergent competitive outcomes. Second, we contribute to a strategic-differentiation perspective on CSR, defining the conditions under which CSR may or may not result in competitive advantage. In particular, we highlight the possibility of a counterpositioning equilibrium where firms take opposing stances on social issues as a way of increasing differentiation and mutually enhancing profits. Third, we highlight the importance of taking the competitive context into account when evaluating the financial benefits of CSR. Our model predicts that firms are more likely to pursue CSR in more competitive markets, but also suggests that this effect may reflect greater potential for counterpositioning and thus be stronger for polarized issues. Our framework moves beyond the recognition that firms respond to social pressure in diverse ways (Oliver, 1991; Duanmu et al. 2018) to develop a formal theory of the conditions under which CSR by one firm is likely to be emulated, ignored, or opposed by others; in doing so, it extends recent attempts to bring more systematic and cumulative theory building (Oxley et al., 2010) to strategy research on CSR (Kaul & Luo, 2018; Asmussen & Fosfuri, 2019; Wang et al., 2020).

CSR, differentiation, and issue contestation

As discussed, a growing body of research has proposed a strategic view of CSR, seeing CSR activities as a way for firms to achieve competitive advantage. At the heart of this work is the idea that at least a subset of the firm's key stakeholders—e.g., a segment of its customers (Fosfuri et al., 2015), or a section of its employees (Greening & Turban, 2000; Burbano 2016; Flammer & Luo 2017; Carnahan et al., 2017)—value efforts at being socially responsible, and reward socially responsible firms by offering them superior terms in the product and factor market, respectively. Firms that are quick to adopt CSR practices take advantage of this opportunity to differentiate themselves from their rivals, and make the pursuit of CSR a source of competitive advantage.

The extent of this competitive advantage depends upon two factors. First, it depends upon the pervasiveness of the social concern, i.e., the proportion of stakeholders who care about the issue (RePass, 1971) and are willing to reward the firm for its socially responsible actions. Most existing models assume that a portion of the relevant population is indifferent to the issue (Besley & Ghatak, 2007; Baron, 2009), and attempts by firms to raise prices or lower wages to profit from their CSR investments make them less attractive to this section of the population (Kotchen, 2006). As a result, these studies predict a separating equilibrium where some firms invest in CSR and focus on serving stakeholders who value such investments, while others refrain from CSR to serve the rest of the population (Arora & Gangopadhyay, 1995; Kitzmueller & Shimshack, 2012). Indeed, CSR may only be a source of competitive advantage if some firms invest in CSR and others don't. If all customers or employees valued CSR equally, all firms would be motivated to invest in CSR, and while CSR might still yield additional profits for the firms (so long as the market premium they could command was greater than the cost of being responsible), it would not be a source of competitive differentiation. Further, these arguments suggest that CSR investments are less likely in more competitive product markets, the intuition being that the greater the competitive pressure on the

firm, the less it can afford to raise its prices to cover the costs of CSR (Bagnoli & Watts, 2003).

Second, the competitive advantage from CSR depends upon the magnitude of utility that stakeholders derive from the firm's CSR activity, i.e., how much a person is "passionately concerned about and invested in an attitude" (Krosnick, 1990: 60). The greater this magnitude, the greater the potential gains to the firm from investing in CSR. While conceptually distinct, we can combine these two factors—the pervasiveness of concern for an issue and the magnitude of that concern—together to speak of the *salience* of an issue, as the extent to which an average person in the relevant population derives utility from socially responsible actions by firms that address the issue. Social issues vary in their salience, with some issues, e.g., health care, climate change, gun control, etc. being very important to many people, while others, e.g. school vouchers, the conflict in Kashmir, etc. are less salient, because few people care about them or because people care about them relatively little. Of course, the salience of a social issue may change over time, e.g., the salience of gender equality in the aftermath of the #metoo movement, or the concern for racism in the United States following the killing of George Floyd. Clearly, the greater the salience of an issue, the greater the potential gains to a firm, ceteris paribus, from taking action to address it (Bonardi & Keim, 2005).

While the salience of a social issue is widely acknowledged as an important parameter driving strategic CSR—albeit implicitly, in that few theoretical models or empirical studies directly explore the effect of salience on the competitive or performance consequences of CSR—what has received little attention in this work is the fact that social issues are often contentious or divisive (Fridkin et al., 1999). Existing models generally assume that CSR activities are unambigiously seen as 'good', with stakeholders either valuing them or (at worst) being indifferent (Besley & Ghatak, 2007; Kitzmueller & Shimshack, 2012). But, in many cases actions that are seen as good by some people may be opposed by others, who may therefore take umbrage at the firm's support for these issues and punish the firm for what they see as its irresponsible or hateful actions (Burbano, 2020).

In evaluating the competive advantage from strategic CSR, it is thus important to take into account *agreement* on an issue, i.e., the extent to which opinions are similar across the relevant population (Meyer & Höllerer, 2010). Different social and environmental issues are characterized by distinctive distributions of attitudes (Baldassari & Bearman, 2007). Some issues—such as children's rights and disaster relief—elicit agreement among consumers; few, if any, people are against them. Other issues—e.g., abortion rights, gun control, immigration, etc.—are contested, with a substantial number of people taking a stand for or against. Parties differentiate themselves by espousing positions on these issues to appeal to certain attitudes rather than others (Glaeser, 2005; Carrillo & Castanheira, 2008: De Sio & Weber, 2014). For instance, on the issue of gun rights, while some companies, e.g. Dick's Sporting Goods, have taken a strong stand in favor of gun control, others, e.g. Black Rifle Coffee Company, have sought to champion gun ownership. Low agreement decreases the attractiveness of undertaking CSR related to an issue because firms risk alienating those who support the opposite position (Burbano, 2020). If a firm does act, however, low agreement increases the benefits to its rivals from either staying neutral or acting in opposition, since by doing so they can cater to those who oppose the firm's actions (Vaaler & Waldfogel, 2019).

The importance of issue agreement results from the nature of CSR as a form of strategic differentiation. Differentiation through CSR is distinct from differentiation based on usual product attributes like price and quality. First and foremost, because social issues are associated with externalities (Luo & Kaul, 2019), stakeholders' utility is impacted not only by the actions of the focal firm but also by those of other firms. As a result, consumers react negatively to firms that take positions they oppose in a way they would not to other product attributes. Consumers do not boycott a firm for selling products in a color they dislike, but they may boycott it for undertaking CSR activities they oppose. Second, whereas attributes are the characteristics of products or brands—and thus a single producer can have multiple products, each with distinctive attributes—

CSR is typically a part of the organization's identity (Sen & Bhattacharya, 2001). Thus, a firm can offer different products with different attributes but can only take a single stand on an issue or else risk being seen as inauthentic (Besley & Ghatak, 2007). Third, consumers reward firms who are seen to take authentic positions on social issues (Hawn & Ioannou, 2016) more than firms who are perceived to engage in "greenwashing" or window dressing. This results in inertia in social positions. Firms can more easily sell products in new colors than support a cause they previously opposed.

Not only does the preceding discussion highlight the need to examine how strategic CSR plays out in the face of product market competition when the issue in question is low in agreement (or polarizing), it also suggests the need to take the characteristics of the social issue being addressed by CSR into account when assessing strategic CSR more broadly. In what follows, we develop a formal mathematical model to address this lacuna and explore how the equilibrium investments of firms are impacted as we vary the salience and agreement of the issue they are seeking to address.

A mathematical model of CSR competition

Formal modeling approach

We develop an analytic model of the use of CSR as a means of issue-based positioning through which firms compete in the market. The use of a formal model allows us to analyze interaction among multiple parties, ensuring that all actors—firms and consumers—make optimal choices from the alternatives available, and that the outcome reflects a true equilibrium. Moreover, a model allows us to link firms' CSR choices to their positions in product markets, thus considering both the implications of market competition for CSR, and the spillover effects of CSR on competitive dynamics in the product market. A further advantage is that a model enables us to make fine-grained distinctions between concepts that may be conflated in verbal theory and to study the independent effect of each construct on CSR as well as to consider the interactions between these constructs. Finally, our use of a model is consistent with both substantial prior literature in

economics (Kitzmueller and Shimshack, 2012), and a growing body of work in strategy that has relied on formal models to enhance the replicability and rigor of nonmarket theory (Baron, 2001; Fosfuri et al. 2016; Kaul & Luo, 2018; Chatain & Plaksenkova, 2019; Asmussen & Fosfuri, 2019).

Our model differs from prior models of strategic CSR in two key ways. First, prior economic models of CSR assume that some people care about the social issue while others are indifferent (Kotchen, 2006; Besley & Ghatak, 2007; Baron, 2009); in contrast, we assume that everyone[2] cares about the social issue, but can have opposing views on it, so that any CSR action the firm takes will be rewarded by one section of the population but punished by the other. Second, the prior models mentioned above have generally focused on deriving the equilibrium response of firms (and other actors) to a single (given) issue; in contrast, our focus is on examining how the equilibrium response of competing firms varies with the nature of the issue, i.e., we are interested in mapping issues that vary in their salience and agreement to their corresponding competitive equilibria.

These key differences aside, our model is related[3] to Besley & Ghatak (2007) in that like them we model competition in the consumer market where otherwise identical firms can vertically differentiate themselves by appealing to a set of consumers who value socially responsible actions (or, equivalently, the provision of public goods). In addition to the two main differences already mentioned, our model also differs from theirs in that while they model competition between multiple firms with free entry, we model duopoly competition between two firms. We do not see this as too serious a difference, given that even in their model all firms ultimately separate themselves into one of two strategies – pursuing CSR or staying neutral. Moreover, our focus on duopoly competition is consistent with models by Bagnoli & Watts (2003) and Baron (2009). Like

[2] In Appendix 7, we relax this assumption and allow a fraction of the population to be indifferent to the issue. Even in this case, some fraction of the population remains opposed to the cause, and our main findings are qualitatively unchanged.

[3] Other models in recent work have been used to address very different questions, such as non-profits' optimal choice of issues to take up (Heyes & Martin, 2015)[3] or labels to offer (Heyes & Martin, 2017), or the provision of public goods supported by corporate owners (Morgan & Tumlinson, 2019).

Bagnoli & Watts (2003), we consider the moderating role of product market competition on CSR choices, except that they vary product market competition by distinguishing between Bertrand and Cournot competition, while our differentiated duopoly model (Baron, 2001; Zanchettin, 2006) allows us to model a wider range of product market competition. Our use of this model connects our work to a recent paper by Kaul and Luo (2018). Like us, Kaul and Luo use a differentiated duopoly model to examine how firms differentiate themselves in the consumer market using CSR. The focus of their work is on competition between a for-profit and a non-profit, however, while ours focuses on competition between for-profits. Overall, our model is thus quite distinct from prior work, even though it draws on elements of this work where appropriate.

Consumer market competition

To keep our model tractable, we focus on a single stakeholder group—consumers—and on a single market—the market for firms' products—as the arena of inter-firm competition. Our focus on a single stakeholder group is consistent with the development of formal theory in this area (Heyes & Martin, 2015; Morgan & Tumlinson, 2019), as is our focus on consumers as the focal stakeholder group (Fosfuri et al., 2016). We believe the general insights from our model may be extrapolated to other stakeholder groups—employees, regulators, investors—that firms may seek to please through CSR efforts (Dorobantu et al., 2017, Luo & Kaul, 2019).

We model consumer market competition as a differentiated duopoly (Singh & Vives, 1984; Zanchettin, 2006). As discussed, we choose this model because it has been used in prior nonmarket strategy research (Baron, 2001, Melloni et al., 2019, Kaul & Luo, 2018). Consider two profit-maximizing firms, A and B, competing in a consumer market.

The (exogenously determined) utility function of the representative consumer is:

$$U = \alpha(q_A + q_B) - \frac{1}{2}({q_A}^2 + {q_B}^2 + 2\gamma q_A q_B) + m$$

Where q_A and q_B are the quantities sold by firm A and firm B respectively, and m is a numeraire good (Kaul & Luo, 2018). The parameter α is the intercept of each firm' inverse demand curve and thus reflects the marginal utility to the average consumer of the first unit of the firm's good she consumes (Zanchettin, 2006; Kaul & Luo, 2018). The parameter γ captures the extent to which the offerings of the two firms are seen as substitutes for each other, with $0 \leq \gamma \leq 1$ (Zanchettin, 2006). If $\gamma = 1$, the two offerings are perfect substitutes; if $\gamma = 0$, the two offerings are entirely independent, and each firm is, in effect, an independent monopoly.

On the supply side, both firms incur an identical[4] and constant variable cost of c with each unit they sell, where $\alpha > c$, i.e., firms can make a profit by supplying the market. For simplicity, we assume no fixed costs. Firms are assumed to engage in Cournot competition[5], i.e., to choose the optimal quantities to supply in order to maximize their overall profits. The realized prices corresponding to the chosen quantities are p_A and p_B for firms A and B respectively, and their profits are thus given by $\pi_A = (p_A - c)q_A$ and $\pi_B = (p_B - c)q_B$.

CSR benefits and costs

In addition to engaging in quantity-based competition, firms may also compete by undertaking CSR: by taking a stand or adopting a practice related to a social issue[6]. In line with our earlier discussion, we characterize every social issue using two parameters. First, we consider the *salience* of the issue as the additional utility the average consumer derives when buying from a firm that undertakes CSR in line with her position. We assume that the average consumer derives (and is willing to pay for) an additional utility of $\alpha\phi$ for every unit of such a firm's offering she consumes.

[4] Since our primary interest is in studying issue-based positioning, we keep the baseline model of consumer market competition as simple as possible by assuming that firms face identical levels of demand and cost, i.e., $\alpha_A = \alpha_B = \alpha$ and $c_A = c_B = c$. We discuss the possibility of relaxing these assumptions in a later section on potential extensions.
[5] We discuss the case of Bertrand competition in a later section on extensions.
[6] For simplicity, we assume that the firm's decision to undertake CSR is dichotomous, i.e., it either does or does not undertake CSR in support of an issue. Different levels of CSR activity would correspond to different values of ϕ and τ.

$\phi \geq 0$ is thus a parameter for the salience of the issue, with higher values of ϕ corresponding to issues that consumers care more about. For purposes of exposition, we only consider values of $\phi \leq 1$ in the discussion that follows, though the results are unchanged if we consider higher values of ϕ.

Second, we consider the level of *agreement* among consumers on the issue. Specifically, we introduce a parameter λ, defined as the proportion of consumers who hold the majority position on the focal issue[7]. Clearly, $0.5 \leq \lambda \leq 1$, with higher values of λ indicating that the majority position has more or less unequivocal support, while values of λ closer to half imply that similar numbers of consumers hold positions for the issue as those who hold positions against it.

For the purposes of our main model, we assume that the parameters ϕ and λ are exogenous, meaning that firms cannot influence the salience of the issue or its level of agreement. What firms can do is undertake CSR in support of one side of the issue. Doing so makes the firm's offering more valuable to those whose position on the issue it supports (λ of all consumers), since they receive additional utility (equal to $\alpha\phi$) when buying from a firm that shares their position. At the same time, it makes the firm's offering less valuable to those who oppose its position. Such consumers may see buying from such a firm as a betrayal of their values, and will choose to boycott the firm's offerings. By supporting the majority position through its CSR, a firm thus limits its effective market to a fraction λ of consumers. Our assumption that opponents of the firm's actions will boycott it entirely implies that consumers punish a firm whose position they oppose more than they reward a firm whose position they support (at least for values of $\phi < 1$), which is consistent with recent evidence (Burbano, 2020).

In addition to the opportunity cost of lost sales to those who oppose its position, CSR may raise the operating costs of the firm. Specifically, we assume that undertaking CSR raises the cost of

[7] For the purposes of our main model, we assume that there are exactly two positions on every issue: for and against. We allow for more nuanced positions on the issue in an extension to the main model discussed in a subsequent section.

the firm's operations by a factor τ, so that the (variable) operating cost of a firm undertaking CSR is $c(1+\tau)$. This increase may reflect the cost of operating more responsibly—e.g., higher input costs from responsible sourcing or increased expenditures on pollution abatement—or it may represent the cost of cash donations or volunteer hours. Clearly[8], $\tau \geq 0$. If τ is equal to or close to 0, then the firm's CSR efforts are largely symbolic (Hawn & Ioannou, 2016; Kaul & Luo, 2018), meaning that the firm claims to support a cause without investing substantial resources in it or changing its internal operations. Examples of such symbolic actions include statements of support for a cause by a firm or its CEO, or the hiring of a few token employees. As τ increases, the firm's CSR efforts may be thought of as increasingly substantive, involving real change to its operations or meaningful contributions of money and other resources to support a social cause. We may thus think of τ as a measure of the *substantiveness* of firms' CSR activities. While there is no upper bound on τ, a profit-maximizing firm will never pursue CSR if $\tau > \frac{\alpha\phi}{c}$ since in that case the margin it earns per unit will fall with CSR. For simplicity, we assume no fixed costs of pursuing CSR, though we return to this assumption later. We also assume that the firm considers a given CSR action on the focal issue—potentially dictated by the demands of activists or the structure of opportunity[9]—so that its choice is limited to undertaking CSR or not and it cannot adjust the cost of CSR by doing less or more of it.

Equilibrium under different scenarios

Given the set-up above, we can consider four possible outcome scenarios: neither firm undertakes CSR (Case I); one firm undertakes CSR, taking the majority position, while the other

[8] If $\tau < 0$, i.e., the firm could improve the efficiency of its operations and thus its margins by being more socially responsible, then it would presumably do so irrespective of rewards from consumers.

[9] All else being equal, the firm would always choose to set $\tau = 0$ if it could, since doing so would maximize profit. Such purely symbolic actions may not be rewarded by consumers in some contexts, however, so the firm may have to incur some operating costs to earn the reward ϕ. Put differently, we can think of the combination (ϕ, τ) as reflecting the CSR activity that maximizes the consumer utility per unit cost from the firm's CSR efforts. If the firm chooses to undertake CSR it will always choose this CSR activity in order to maximize its profits.

stays neutral (Case II); both firms undertake CSR and both support the majority position (Case III); and both firms undertake CSR but take opposite positions (Case IV). We do not consider the case where only one firm undertakes CSR but supports the minority position, because such an action would be irrational from a profit-maximizing perspective. While both firms are assumed to act simultaneously, for ease of notation, and without loss of generality, we assume that if only one firm takes the majority position it is always Firm A.

Using the model, we can derive the equilibrium quantity and profits for each firm under each of these different scenarios, and then determine which scenario will be mutually preferred by both firms. For the sake of brevity, these derivations are shown in Appendix 1, with table 1a and 1b showing the inverse demand curves and equilibrium quantities in each of the four cases, respectively. As table 1b also notes, each firm's profits in equilibrium are proportional to the square of its equilibrium quantity. Two things about these tables are worth noting. First, the two firms sell equal quantities and realize equal profits in Case I, i.e., $q_A^{*I} = q_B^{*I}$ and $\pi_A^{*I} = \pi_B^{*I}$, and in Case III, i.e., $q_A^{*III} = q_B^{*III}$ and $\pi_A^{*III} = \pi_B^{*III}$. This follows directly from our assumption that the two firms are identical in terms of the value of their offerings and their costs in the consumer market, so if they take identical actions, they realize identical profits. Thus it is only in cases II and IV that firm A commands a competitive advantage as a result of CSR. Second, as Case II clearly shows, a firm's decision to undertake CSR impacts not only its own demand curve and equilibrium quantitites and profits, but also those of its rivals, even if (as in Case II) the rival stays neutral.

Salience, agreement, and competitive equilibrium

Having derived the equilibrium quantity and profit for each firm in every one of the four potential scenarios, we are in a position to determine which of those four scenarios will prevail in equilibrium, i.e., which among the four cases represents a situation where neither firm can improve its profitability by making a different choice. We represent the conditions under which each scenario

prevails by determining the threshold values of salience (ϕ)—as a function of agreement (λ), competition (γ), substantiveness (τ), and other market factors—above or below which different scenarios are optimal. These boundary conditions, and the scenarios corresponding to them, are laid out in Table 2, and Appendix 3 provides the precise mathematical expression for each threshold value. We represent these values graphically in Figure 1, which plots the threshold values for the case where CSR is entirely symbolic ($\tau = 0$) and the firms' offerings are perfect substitutes ($\gamma = 1$).

*** Insert table 3 and figure 1 about here ***

We supplement our discussion of each scenario with a case example of an issue from the real world. To arrive at these examples, we pick four issues—capital punishment, animal cruelty, human trafficking, and LGBTQ rights—that differ in their levels of salience and agreement. As described at length in Appendix 4, we confirm these differences in agreement and salience by looking at both newspaper coverage of these issues and their place in the platforms of the two political parties in the 2016 US election. We then draw on media reports and other sources to construct a brief description of CSR activities around these issues and offer these as case examples within each scenario. These examples are not meant to be probative; rather, they are meant to serve as illustrations of the different scenarios and thus to provide face validity for our theoretical claims.

Case I: No CSR

As Figure 1 shows, in cases where both salience and agreement are low, Case I is most likely to prevail, with neither firm choosing to undertake CSR. At first glance this may seem surprising. Given that we assume (for now) that CSR is purely symbolic, i.e., the firm incurs no additional operating cost for undertaking CSR, and that (at least some) consumers are willing to pay a premium to a socially responsible firm, one might think that at least one firm would be incentivized to signal its support for the social issue, thus immediately improving its margins. Indeed, this is what prior models predict (Bagnoli & Watts, 2003; Besley & Ghatak, 2007). And it is what we see in Figure 1

where $\lambda = 1$, i.e., where there is universal agreement amongst consumers on the issue.

As agreement on the issue falls, however, undertaking CSR, even if it involves no more than taking a symbolic stand, is no longer truly costless. With $\lambda < 1$, a firm that takes a stand on a social issue incurs the loss of sales to the $(1 - \lambda)$ fraction of consumers who support the minority position. For CSR to be worthwhile, those who support the majority position must care (and be willing to pay) enough for the firm's CSR efforts to compensate for these lost sales. Specifically, we can define a threshold $\underline{\phi}$ such that for values of salience below $\underline{\phi}$, firm A would be worse off if it took action in support of the majority position alone (i.e., $\pi_A^{*II} < \pi_A^{*I}$), and firm B does not benefit sufficiently from an opposing action to make Case IV feasible ($\pi_B^{*IV} < \pi_B^{*II}$). Given that, firm A has no way of benefiting from undertaking CSR on the issue, and therefore chooses not to do so.

Figure 1 shows that this threshold value generally rises as agreement on the issue falls below its maximum value: the more consumers who oppose the majority position, the greater the opportunity cost to the firm of supporting that position, and the higher the salience of the issue needed to compensate. Yet, for very low values of agreement, the threshold value falls with falling agreement. This non-monotonic effect of agreement on the salience threshold is a result of the potential for counterpositioning; as agreement becomes really low A anticipates that its rival will take an opposing position, thus enhancing the profitability of CSR for A (we discuss this case below). This non-monotonicity means that the level of issue salience required to motivate firms to undertake CSR is highest for issues with moderate agreement, but lowest for those with high agreement. It also means that as agreement on an issue rises, we expect the firm supporting the minority side to switch to supporting the minority position if salience is high, but first go neutral and then take the majority position if salience is medium. If salience is low, increasing agreement makes it likely that firms will go from being neutral to taking a majority position.

The fact that firm A makes greater profit from undertaking CSR than it would from not doing so is necessary but not sufficient to motivate it to undertake CSR. Recall that A's CSR actions do not only boost its profits. They also benefit its rival because now a set of $(1-\lambda)$ consumers will only buy from firm B, which can leverage its market power over these consumers to raise its profits. For firm A to choose to pursue CSR in equilibrium, it must be the case that by doing so its profits are equal to or greater than those of firm B. Otherwise, A would have no incentive to undertake CSR; on the contrary, it would be better served by waiting for firm B to undertake CSR, as doing so would mean a greater boost to its profits.

Figure 1 shows this case, marked Ib, in a region just above the $\underline{\phi}$ line yet below the $\dot{\phi}$ line, where $\dot{\phi}$ is the threshold value above which $\pi_A^{*II} > \pi_B^{*II}$. In this region, both firms would be better off if either firm were to undertake CSR, but because the firm that stayed neutral would do better than the firm undertaking CSR, both firms prefer its rival to be the socially responsible firm. As a result, neither firm will choose to undertake CSR. This case is different from the main no-CSR case (marked Ia) because one firm pursuing CSR would be Pareto optimal, but neither firm will do so because such a move would benefit its rival more than itself. Case Ib thus represents a kind of market failure[10], albeit one that may be overcome if at least one firm were willing to pursue CSR for altruistic or ideological reasons so long as it could do so without reducing its profits.

Example: Capital punishment To illustrate scenario I, consider the case of capital punishment, which is an issue that has low agreement—in a 2016 Pew survey 49% of respondents supported the death penalty, while 41% remained opposed—but is not highly salient in political or public discourse. Political parties rarely mention it in their platforms, and public discourse about the morality of

[10] This case is similar to the adverse pioneering case described in recent work on first mover advantage (Cirik & Makadok, 2021) where firms may choose not to enter a new market at all if each expects to do better as a second mover.

capital punishment has been modest in recent years. Evidence documents that very few firms take public stances either in favor of, or opposing, capital punishment (Maks Solomon, 2020)—with the exception of some pharmaceutical companies for whom drug provision is a more material concern (Lancet, 2017). Elsewhere, corporate activism in support of the abolition of capital punishment is scant and short-lasting. Benetton serves as the most notable exemplar when it espoused a highly public stance against capital punishment in 2000. However, the position did not seem to attract new customers, and commentators were quick to criticize the company for taking positions on issues that were peripheral to its product offerings (Chandler, 2000; Kraidy & Goeddertz, 2003). In fact, the firm's stance caused its products to be dropped by major retail chains, including the loss of a $100m Sears Roebuck & Co. contract, leading to a swift reversal of course. More recently, Lush Cosmetics launched an instore campaign from May 15 to May 25 2017, in support of an initiative by the Responsible Business Initiative for Justice and Death Penalty Focus. Again, its campaign was short-lived, and the stance was abandoned quickly. In both cases, the firms' CSR efforts were met with no response from the rest of their industries—no competitors either supported Benetton or Lush's efforts or came out against them.

Case II Differentiating CSR

For values of salience greater than $\dot{\phi}$, $\pi_A^{*II} > \pi_B^{*II} > \pi_A^{*I}$, it is clearly in firm A's interest to undertake CSR in support of the majority position. This does not mean, however, that firm B is necessarily better off following firm A in its decision to undertake CSR. On the contrary, so long as the salience of the issue is below $\hat{\phi}$, which is the threshold value above which both firms are better off if they act in support of the majority position than if they do not (i.e., $\pi_A^{*III} = \pi_B^{*III} > \pi_B^{*I} = \pi_A^{*I};\ \pi_B^{*III} > \pi_B^{*II}$). The area between $\dot{\phi}$ and $\hat{\phi}$ in Figure 1 thus corresponds to the zone (Case II) in which the issue is salient enough for it to be worth one firm undertaking CSR, but not salient

enough for it to benefit both.

In this zone, both firms make higher profit than they would have made had firm A not undertaken CSR. This follows from the assumption that firm B always has the choice of joining firm A in taking action, so if it chooses not to, it must be because it makes more profit by staying neutral. As in case Ib, by undertaking CSR, firm A differentiates itself from firm B but, also, firm B gains market power within the subset of consumers who oppose A's efforts, resulting in increased profits for firm B (although not as much as the increase in profits for firm A). In this case, firm A enjoys a first-mover advantage: by acting first it benefits from public support for the issue, while leaving too little room for its rival to follow. Investing in CSR results in a competitive advantage for the socially responsible firm, since its rival has no incentive to follow its lead. Note that the zone under Case II tapers away as agreement increases: if no one opposes the majority position, there are no customers for firm B to serve exclusively by remaining neutral.

Example: Animal cruelty. As an example of this scenario, in which only a first mover takes a position on an issue, consider the case of animal cruelty. As an issue, animal cruelty has moderate salience, being of particular concern to some sectors, such as fashion and agriculture, but not especially salient in society in general (Jung, Kim, & Oh, 2016). It also has moderate agreement: whilst there is no unanimity on the use of animals for experiments or commercial exploits, "partisanship is not a factor for this issue" (Strauss, 2016), at least in the sense that no one is really for cruelty to animals. This suggests scope for positioning in support of the majority opinion but very little scope for counterpositioning. In animal husbandry, price differentiation exists as some producers embrace higher standards whilst others do not follow suit but keep to regulatory requirements, a position that is adopted by many competitors (Fifield, 2016). No producers charge a premium for being particularly cruel to animals. Similarly, in the fashion industry, between 2018 and 2020 several major houses—including Burberry, Gucci, and Prada—commited to stop using real fur in their products,

driven by activism by the Fur Free Alliance. At the same time, other fashion houses—including Dior, Louis Vuitton, Karl Lagerfeld, and Canada Goose—continue to breed animals and use their fur, but have avoided taking an explicit counterposition, nor do they seek to increase their use of fur.

Case III Full CSR.

Clearly, where both salience and agreement are high, both firms may profit from acting in support of the majority position. This is the case where $\phi > \hat{\phi}$ (implying, as already discussed, that $\pi_A^{*III} = \pi_B^{*III} > \pi_B^{*I} = \pi_A^{*I}$) in Figure 1, with the result that Case III prevails in equilibrium. The intuition is that, if an issue has sufficiently high and unilateral support among the customer base, it makes sense for both firms to undertake CSR. In such case, the additional value created for customers who support the majority position is high enough that firm B is better off serving these customers, even if means going head to head with firm A, than continuing to enjoy a monopoly among those who oppose the majority position. As with Case I, the level of salience required to motivate both firms to undertake CSR rises as the level of agreement falls, again because by choosing to support the majority position, both firms are sacrificing sales to those who oppose their stand. Note that while firm A is better off in this case than it would have been if it had stayed neutral, it does not enjoy a competitive advantage relative to firm B despite having the opportunity to move first, because firm B is able to match its move into CSR.

Example: Human trafficking. As an illustration of the scenario – in which both firms support the majority opinion and neither one enjoys a competitive advantage as a result – consider human trafficking: an unambiguous issue (everyone agrees that it is undesirable) that has become increasily salient to policy makers—the White House held a Summit on Human Trafficking in 2020—and the corporate world, especially in sectors most exposed to it such as banking and hotels (Niethammer, 2020). In the hotel industry, where sex trafficking and labor trafficking are serious issues, two chains,

Hilton and Marriott, initiated measures against human trafficking in 2015 and 2016 respectively. These measures were internal (e.g. training programs for employees to identify signs of trafficking) and widely communicated publicly. Each firm developed its training program in association with the same organizations (Polaris and ECPAT-USA) and collaborated with the United Nations' International Tourism Partnership (ITP). Following Hilton and Marriott, multiple other hotel chains (e.g. Carlson Wagonlit, Hyatt, Accor, Intercontinental) have taken the same anti-trafficking stance by signing up to the ECPAT code and/or by partnering with the ITP. Subsequently, the industry trade body, the American Hotel and Lodging Association, has made a similar training programs available to all its members. In short, there is evidence of convergence around a single position, with key competitors in the industry following the first mover's lead in adopting similar practices and neither first movers nor competitors enjoying a competitive advantage.

Case IV Counterpositioning.

Finally, where salience is high but agreement is low, we have a situation where Case IV is likely to prevail, i.e., a counterpositioning equilibrium where the two firms take opposing stances. In this case, the minority position is strong enough that, faced with firm A's support for the majority position, firm B is better off taking the side of the minority in opposition to firm A, benefiting from its exclusive access to the minority segment (as in Case II), and also from being able to deliver additional value ($\alpha\phi$) to this segment, even if it means abandoning the majority to firm A. This is the case, as shown in figure 1, whenever $\phi > \bar{\phi}$, where $\bar{\phi}$ is the threshold value of salience above which firm B profits more from opposing A than joining it or staying neutral (i.e., $\pi_B^{*IV} > \pi_B^{*II}$ and $\pi_B^{*IV} > \pi_B^{*III}$), and firm A is better off being opposed in its CSR than staying neutral ($\pi_A^{*IV} > \pi_A^{*I}$).

The key point about this counterpositioning equilibrium is that *it only makes sense for firm B to support the minority position if firm A first supports the majority position*. Without firm A's CSR in support of

the majority position, firm B would either choose to remain neutral, or support the majority position. Only given that firm A has already claimed the majority position does it make sense for firm B to support the minority. Not only is Case IV the result of a competitive countermove by firm B, it only makes sense if the baseline level of competition between the two firms is sufficiently high. Specifically, $\bar{\phi}$ is only defined if $\gamma > \bar{\gamma}$ (see Appendix 3 for a derivation of the value of $\bar{\gamma}$). For values of γ less than $\bar{\gamma}$, $\bar{\phi}$ is undefined, because there is no case in which firm B does better by opposing the majority position. The intuition is that firm B benefits by taking the minority position because it can strongly differentiate itself from firm A and earn monopoly rents from the minority. The more differentiated firms A and B already are, the less valuable this additional differentiation.

Example: LGBTQ rights. An example of such an issue is LGBTQ rights. This is a highly salient issue, that prominent companies and CEOs have sought to engage with (Maks-Salomon, 2020), often motivated by arguments based on market position (Maks-Solomon & Drewry, 2020). At the same time, it remains highly polarizing (low agreement), with a 2016 Pew survey finding that 55% of respondents supported same-sex marriage, while 37% were against. As public opinion in favor of LGBTQ rights has grown, many firms in the food and beverage industry—including Starbucks, Burger King, and McDonalds—have publicly and financially supported LGBTQ causes and organizations. In 2012, nearly half of the food and beverage companies rated (26 out of 59) received high marks on their support for LGBTQ causes on the Corporate Equality Index (CEI), a rating of firms' LBGTQ-friendliness published by the Human Rights Campaign.

This support has not come without a backlash. For instance, when McDonalds became a member of the National Gay & Lesbian Chamber of Commerce in 2008, it was met by a call for a boycott from the American Family Association. More importantly for our theory, at least one competitor in this industry—the fast-food chain Chick-fil-A—has chosen to counterposition against

this trend, sponsoring events by organizations opposed to LGBTQ rights, such as the Pennsylvania Family Institute, and drawing explicit attention to the founding family's opposition to same-sex marriage through a string of media events in 2011. This counterpositioning stance produced a mixed reaction: on one hand, student organizations in New-York, Illiniois, and North Carolina petitioned to remove Chick-fil-A stores from campus grounds in 2012, and the Jim Henson Company withdrew from its cooperation with the firm. On the other hand, there were calls to counter this boycott, with Fox News host Mike Huckabee instigating a counter-movement, the Facebook page for which quickly gathered 400,000 followers and over 630,000 RSVPs, and that produced queues at many Chick-fil-A locations. In the years following Chick-fil-A's counterpositioning stance, the company has seen consistent upward growth in both aggregate revenue and per-unit revenue compared to its closest competitor KFC, as shown in Appendix 5. In the eight years following the controversy, Chick-Fil-A grew from having 1,500 locations to 2,600 locations, its revenues grew 13% annually from $4.5 billion at the time of its stand to over $11 billion today, and it grew from being the 15th largest fast-food chain in America to the third largest in 2019, with revenues of $4.69 million per branch, the second-highest of any fast-food chain in the US, and substantially higher than the industry average. Of course, not all this success can be attributed to Chick-Fil-A's anti-LGBTQ position; nonetheless it seems that taking a contrary stand on a salient but polarizing issue did not harm Chick-Fil-A and may even have helped bolster its appeal among some customers.

*** Insert figures 2a and 2b about here ***

Moderators and extensions

Moderating role of substantiveness

Thus far we have modeled the case of symbolic CSR, i.e., where undertaking CSR does not incur additional operating cost ($\tau = 0$). Figures 2a and 2b show the effect of moving towards more substantive CSR activities. Specifically, the picture in Figure 1 changes as we increase the operating

costs of conducting CSR, with Figure 2a showing the case where $\tau = 0.2$ and Figure 2b showing the case where $\tau = 0.5$. Note that the latter case reflects a substantial investment in social responsibility, with the firm's operating costs now being 50% higher as a result of its CSR efforts.

As both figures show, the main effect of increasing the cost of CSR (and thus moving from symbolic to substantive efforts) is, unsurprisingly, to make CSR efforts less likely. To begin with, while purely symbolic CSR activities were always worth undertaking so long as there was full agreement on the issue ($\lambda = 1$), this is no longer the case with substantive CSR efforts, which require some baseline level of salience to make CSR worthwhile, even for universally valued activities. The intuition is that, as the operating cost of undertaking CSR increases, the firm must be able to pass on this cost to consumers to make investing in CSR worthwhile, and it can only do so if the utility consumers derive from CSR is above some threshold level. Further, this threshold level will be higher, the higher the increase in operating costs, as shown by comparing Figures 2a and 2b.

More generally, the two figures show a clear pattern of an increasing area under cases I and II, coupled with a decline in the area under cases III and IV, as the operating cost of CSR increases. In other words, ceteris paribus, firms are more likely to undertake symbolic CSR activities than substantive CSR efforts, and are more likely to counterposition in response to efforts by rivals that are purely symbolic. We note that corporate engagement with the issue of LGBTQ rights, where corporates take public positions on either side, has often been linked to purely symbolic efforts with high-profile firms such as Delta Airlines, Morgan Stanley and JPMorgan being criticized for not following through on their public statements[11].

Moderating role of market competition

In Figures 3a and 3b, we explore the moderating role of market competition. Whereas

[11] https://www.nbcnews.com/feature/nbc-out/bolsonaro-backlash-event-honoring-brazilian-leader-calls-question-corporate-support-n1000431

Figure 1 shows the prevailing scenarios where the two firms' offerings were perfect substitutes ($\gamma = 1$), Figures 3a and 3b show the prevailing scenarios where the offerings are partial substitutes ($\gamma = 0.6$) and almost independent ($\gamma = 0.2$), respectively. In other words, they show cases of moderate and low competitive intensity. A decrease in the level of competition reduces the probabilities of Case II and Case IV. Thus, while an increase in the cost of CSR tended to raise the threshold level of salience required to invest in CSR across the board, pushing the lines in Figure 1 upward, a reduction in competition tends to shift those lines leftward instead, raising threshold levels when agreement is low, but not when it is high. In the extreme, if the firms' offerings are completely independent, we never observe Case II or Case IV. The intuition is that firm B only benefits from not following firm A in undertaking CSR (either by staying neutral or by taking an opposing position) because doing so helps differentiate it from firm A; the more differentiated the firms are, the less valuable this becomes. In the extreme, if the firms' offerings are fully independent ($\gamma = 0$), firm B derives no benefit from additional differentiation[12]. If enough people care sufficiently about the issue to make it worthwhile to take action, both firms will do so; if not, both will stay neutral.

*** Insert figures 3a, 3b and 3c about here ***

Comparing Figures 1 and 3b suggests two key implications for the effect of competition on CSR. First, *competition enhances the financial benefits to CSR*, especially for highly contested issues. As competitive intensity decreases, the threshold salience required to induce either firm to undertake CSR rises, especially for low levels of agreement (λ). This is because a benefit of CSR (at least in Case II and Case IV) is that it differentiates the firm from its rival. Lower competitive intensity weakens this benefit. This prediction runs counter to some prior work (Bagnoli & Watts, 2003),

[12] Where $\gamma = 0$, $\bar{\bar{\phi}} = \hat{\phi} = \underline{\phi}$; absent competitive interaction, each firm makes an independent decision on whether to support the majority position or not, unaffected by the other firms choices.

which argued that competition would reduce CSR as lower margins would make CSR harder to afford. The difference lies in the assumption about how those who do not support the cause respond: if they are indifferent, CSR investment produces vertical differentiation between firms on price; if they are opposed, CSR investments produce horizontal differentiation, dividing the market into non-overlapping segments, especially if the two firms counterposition. Allowing for issue polarization introduces the possibility that firms use CSR to reduce competitive intensity, making CSR more likely where competitive intensity is high (and such reduction is therefore valuable). This prediction, while at odds with prior theoretical work, is consistent with recent evidence for a positive relationship between competitive intensity and firm CSR (Fernandez-Kranz & Santalo, 2010; Flammer, 2015a). Our model extends these insights by highlighting the equilibrium conditions under which such differentiation may be sustained[13], and by suggesting the moderating effect of issue agreement—where agreement is high (λ is close to 1), competition may have little effect on CSR.

Comparing Figures 1 and 3b also highlights the potentially perverse effects of product market competition: even as it makes any firm more likely to take action on an issue, *it also makes that firm's rival more likely to stay neutral or to take an opposing action*. Both Case II and Case IV thus represent scenarios in which a firm's action on an issue does not diffuse to its competitors; rather, its rival diverges, seeking to increase its differentiation. Such differentiation is mutually beneficial—both firms enjoy higher profits than they would otherwise. As Vaaler and Waldfogel (2019) show, there is evidence of counterpositioning in the highly competitive airline sector around the theme of the recognition of the state of Israel, which despite being polarizing is of low to moderate salience in much of the world. In sum, product market competition makes it more likely that firms will take action on a given issue, but less likely that they will take similar ones.

[13] Absent these conditions, it is unclear how differentiation through corporate activism is sustained, i.e., if one firm gains an advantage by taking pro-social actions why don't all firms imitate it, eliminating any differentiation?

Finally, Figure 3c shows the equilibrium outcomes where market competition is moderate ($\gamma = 0.6$) as is the cost of CSR ($\tau = 0.2$), to get a sense for the interaction between substantiveness and competition. This graph combines features of Figures 2a and 3a, with the threshold lines shifting both up and leftward compared to Figure 1, suggesting that the two factors operate largely independently. In particular, while both reducing competition and increasing cost of CSR make counterpositioning less likely, they restrict it in different ways. Higher costs raise the level of salience required at each level of agreement to trigger counterpositioning, while lower competition increases the level of disagreement necessary at every level of salience to have the same effect.

Insert Figure 4a and 4b about here

Extension: issue fragmentation

Thus far, we have assumed that a firm must choose between only two positions on an issue (if it takes action): either for or against. We see this as a reasonable assumption for many social issues, especially given the polarized nature of recent culture wars, as well as the challenges of communicating and maintaining a more nuanced position. That said, there are certainly issues where there are multiple different positions that a firm supporting (or opposing) the issue can take, with each position being especially valued by a subset of the consumers. For instance, within the umbrella of LGBTQ rights, some may care more about benefits for same-sex couples, and others may be more concerned with protection for transgender individuals.

To account for this fragmentation of issue space—and the potential for firms to take different positions on an issue, while still being on the same side overall—we develop an extension to our main model, where we build on prior work on issue positioning (Heyes & Martin, 2015; 2017). In the interest of brevity, the details of the extension are laid out in Appendix 6. Briefly, we assume a continuum of positions that a firm can take when supporting (or opposing) an issue, and that consumer preferences are evenly distributed along this continuum (Heyes & Martin, 2015;

2017). A consumer derives full utility ($\alpha\phi$) from the firm's action only if it takes the consumer's favored position[14]; as the distance between the consumer's preferred position and the firm's position increases, the utility derived by the consumer falls linearly (Heyes & Martin, 2015), until at a distance $\frac{w}{2}$ the consumer no longer receives any utility from the firm's action and is indifferent to it. The parameter w ($0 < w \leq 1$) thus reflects the extent of fragmentation of the issue.

Figures 4a and 4b show the effect of this fragmentation, setting $w = 0.5$, and τ equal to 0 and 0.2 respectively. Issue fragmentation has two key effects. On one hand, it reduces a firm's incentive to take action on the issue. Fragmentation means that any given CSR activity is only valued by a subset of the consumers who support the issue; even among this subset the average utility received is now lower, since many potential supporters would have preferred the firm focus on some other position while supporting the issue[15]. In other words, as consumers start to distinguish between CSR activities (e.g. domestic partner benefits and transgender inclusive facilities), and develop nuanced preferences, the returns to any one activity are lower. On the other hand, issue fragmentation makes the counterpositioning equilibrium less likely, because firm B now has the option of taking an action in support of the majority position that is sufficiently different from that of firm A that the two have little or no overlap, and which is thus likely to be preferable to investing in CSR in support of the minority[16]. As figures 4a and 4b show, we therefore no longer see the case of a counterpositioning equilibrium with $w = 0.5$. At the same time, we also do not see the case where one firm stays neutral; instead, both figures show a new case, case IIIb. This case arises

[14] We assume that a firm can only take one position on the issue (Heyes & Martin, 2015). If a firm can (costlessly) take multiple positions, then we are essentially back to our main analysis where a firm is either for or against the issue overall.

[15] Specifically, the average utility across the $\theta\lambda$ potential supporters is now just $\frac{\alpha w \phi}{2}$.

[16] Things get more complicated if we permit competition between more than two firms. While modeling that case is beyond the scope of this paper, the intuition, building on Heyes and Martin (2015), is that firms act in favor of the majority until a complete set of non-overlapping positions is staked out, and counterposition thereafter.

because the $\underline{\phi}$ threshold now lies above the $\hat{\phi} = \dot{\phi}$ threshold. In this zone, firm A would be worse off if it invested in CSR and firm B stayed neutral, but firm B has no incentive to do so since it is better off joining firm A in taking a stand for the majority (albeit one sufficiently differentiated from firm A). Thus above the salience threshold indicated by the $\hat{\phi} = \dot{\phi}$ line both firms take (maximally differentiated) stands in support of the majority position, with such stands being more likely for symbolic actions than for substantive actions (as shown by the comparison between figure 4b and 4c). CSR investments in relatively fragmented issues are less likely to produce competitive advantage, since multiple firms can find distinct but equivalent positions in support of the majority position.

Other extensions

Several other extensions to our model are worth considering. While fully developing these extensions is beyond the scope of the current study, we briefly discuss the potential implications of relaxing some of the model's key assumptions, if only to suggest avenues for future work.

Inertia. A first extension to consider is the case where a firm is unable to act either for or against a social issue because it has fixed investments or other commitments that it cannot change, or because it faces a constraining regulatory regime. In such cases, we would clearly not see a counterpositioning equilibrium. We would also, however, be less likely to see the firm's rival undertake CSR, precisely because it can no longer count of the focal firm's opposition.

Endogenous salience. A second extension to consider is that firms may be able to invest in increasing issue salience (e.g., by supporting advocacy efforts, or spending on advertising that promotes the issue). The intuition from our main model is that such investments would only make a counterpositioning equilibrium more likely. For one thing, firms seeking to invest in raising issue salience face a free-riding problem: they must bear the costs of such investments on their own, but may be unable to keep their rivals from benefiting from CSR once the issue becomes salient. It follows that an individual firm will only be motivated to invest in raising issue salience if it hopes to

realize a competitive advantage from doing so, which is most likely only in the counterpositioning equilibrium, Case IV. In addition, even if firms could (informally) cooperate to increase issue salience, the joint profits of both firms in our model are generally highest in Case IV, which allows both firms to differentiate themselves from each other, thus boosting both of their profits in excess of what they would get by serving consumers' pro-social preferences alone. Thus, ceteris paribus, firms looking to invest in increasing issue salience may benefit the most by doing so in markets where they face intense competition, and on causes that are already hotly contested.

Economies of scale A third extension is to consider a fixed cost of investing in CSR, or, equivalently, allowing for economies of scale in CSR. If CSR were subject to economies of scale this would tend to increase the region under Case II in Figure 1, since it would make it less likely that it would be profitable for both firms to invest in CSR. Indeed, in such a case, making a fixed investment in CSR may act as a commitment device, cementing firm A's competitive advantage from undertaking CSR. Relatedly, while the current model pays little attention to entry dynamics, in line with prior work (Bagnoli & Watts, 2003; Kotchen, 2006; Besley & Ghatak, 2007), future work could explore strategies firms undertaking CSR could use to deter CSR by rivals.

Model refinements Finally, future work could relax several of our assumptions to allow for greater complexity. For instance, future work could examine the effect of assuming Bertrand rather than Cournot competition in the consumer market. Switching to Bertrand would enhance the moderating effect of competition, since firms in highly competitive markets would make less profit under Bertrand competition than under Cournot, making Cases II and IV more likely. Future work could also allow for greater asymmetry: for instance, by allowing the two firms to differ on their costs ($c_A \neq c_B$) or demand intercepts ($\alpha_A \neq \alpha_B$). Similarly, future work could allow for asymmetric salience, with supporters on one side of the issue valuing firm support more than those on the other side, in line with recent work that has shown an asymmetric effect of boycotts on liberal vs.

conservative board members (McDonnell & Cobb, 2019). Future work could also look into the case of competition among N firms (Hackner, 2000), especially in the case of high issue fragmentation, where there may be multiple positions for firms to occupy (Heyes & Martin 2015, 2017).

Discussion

Summary of empirical predictions

The findings from our model offer a rich set of predictions for future empirical testing. To begin with, they suggest that the nature of the social issue has important implications for whether firms engage in CSR related to it, and whether such CSR results in competitive advantage. Specifically, it suggests that while the likelihood of firms undertaking CSR increases with issue salience (unsurprisingly), the level of salience required to motivate CSR is moderated by issue agreement in a non-linear way, so that the salience required is greatest for moderate levels of agreement and lowest for high levels of agreement. Moreover, the likelihood of CSR resulting in competitive advantage is positively related to salience only for low agreement issues; for issues with moderate to high agreement, CSR is more likely to lead to competitive advantage with moderate levels of issue salience. Similarly, the model implies that while the likelihood of firms undertaking CSR increases with issue agreement, the likelihood of this resulting in competitive advantage actually decreases with issue agreement, with the former relation being stronger (and indeed only holding) with low issue salience while the latter holds with high issue salience. The model also suggests that increasing product market competition is expected to increase both the likelihood of firms undertaking CSR (contrary to Bagnoli & Watts, 2003) and CSR being a source of competitive advantage, but only for issues with low agreement and high salience. Finally, the model suggests that the salience levels needed for CSR are generally higher for substantive CSR activities than for symbolic efforts, and that other things being equal, increasing competition or decreasing agreement are more likely to yield symbolic rather than substantive CSR efforts. Table 3 summarizes these predictions.

Insert Table 3 about here

Contributions

These empirical predictions aside, our study extends the existing theory of strategic CSR in several ways. First, we provide a systematic and rigorous account of the conditions under which a firm's CSR efforts will be matched, ignored, or opposed by its market rivals. Prior work in economics has generally predicted a separating equilibrium (Kotchen, 2006; Besley & Ghatak, 2007; Kitzmueller & Shimshack, 2012), with firms responding to their rival's CSR efforts by staying neutral, while institutional accounts of CSR often assume that CSR practices will diffuse among rivals, provided normative pressures are sufficiently strong (Marquis et al., 2007; Briscoe et al., 2015; Briscoe & Gupta, 2016). Not only do we introduce a third possibility—that firms may actively oppose their rival's CSR—but we map out the conditions under which each of these different reactions are likely to prevail, as a function of issue characteristics, product-market competition, and the costliness of CSR efforts. In doing so, we also highlight the importance of taking competitive response into account when undertaking CSR strategically. Our model shows that CSR efforts may be profitable without contributing to competitive advantage (e.g. Case II); in fact, if a firm acts considering only its own profitability but not its rival response, it may place itself at a disadvantage (Case Ib). Only if support for CSR is limited enough that only one firm may profitably invest in it (Case II), or contested enough that CSR investments by a firm will prompt its rivals to counterposition (Case IV), is CSR likely to be a source of competitive advantage for a firm. Put differently, while firms may adopt CSR if either issue salience *or* issue agreement is high, it is most likely to lead to competitive advantage only if salience is high *and* agreement is low.

Second, our model introduces issue polarization as a key determinant of competitive response to, and returns from, strategic CSR. While scholars have long recognized that social issues are often contested (Becker, 1985; Meyer & Staggenborg, 1996), such polarization has largely been

ignored in prior work on strategic CSR (Besley & Ghatak, 2007; Kitzmueller & Shimshack, 2012; Kaul & Luo, 2018), which has tended to work on the assumption that everyone is agreed on what is 'responsible' (see Burbano, 2020, for a recent exception). By introducing the level of agreement on a social issue into a formal model of strategic CSR, and by showing how the inclusion of this factor significantly changes CSR interactions, we offer an important advance over prior theoretical work in this area. More generally, while most existing research (both theoretical and empirical) has paid little attention to the nature of issues being considered—often focusing on a single issue or assuming that the findings apply broadly across all issue domains—our study shows how CSR works differently for different types of issues and thus emphasizes the need to pay greater attention to issue characteristics when studying strategic CSR.

Third, our study sheds new light on the role of product market competition in driving strategic CSR. Not only does our model predict that increasing competition will be associated with greater CSR, thus offering a potential reconciliation between formal theory and empirical findings (Fernandez-Kranz & Santalo, 2010; Flammer, 2015a), it also suggests that this relation will be strongest for symbolic action on highly contested issues, with firms taking opposite stands on those issues (Duanmu et al., 2018). We thus add additional nuance to effect of competition on CSR, while highlighting the importance of recognizing that increased CSR activity does not necessarily equal positive social change, to the extent that firms are counterpositioning and thus ending up on opposite sides of an issue. Finally our use of a formal model allows us to build cumulatively on formal work in this area (Besley & Ghatak, 2007; Kaul & Luo, 2018; Heyes & Martin, 2015), while adding to a growing body of work that has brought formal rigor to nonmarket strategy theory (Baron 2001; 2009; Fosfuri et al. 2016; Luo et al., 2018; Asmussen & Fosfuri, 2019; Chatain & Plaksenkova, 2019; Lazzarini, 2019).

Directions for Future Research

Our theory has many boundary conditions which offer scope for future extensions. First, as already discussed, our model makes several simplifying assumptions in the interest of parsimony (Knudsen et al., 2019), and future work may extend our theory by relaxing these assumptions. Indeed, one of our reasons for choosing a formal modeling approach was the ability of future scholarship to undertake this kind of cumulative theory building.

Second, while our model focuses on one specific set of stakeholders—customers—future work could adapt our model to study the relationship between competition and CSR in factor markets, such as the market for employees (Burbano 2016, 2020; Flammer & Luo, 2017; Carnahan et al., 2017), or in markets for regulation. While we expect our core theoretical arguments to apply across a wide variety of stakeholders, it would certainly be interesting to study the nuances of firm action and rival response in other stakeholder contexts, including, potentially, by modeling firms serving multiple stakeholders at once.

Third, while our model assumes that issue salience and agreement are exogenous to firm action, future work could consider the possibility that firm actions impact these attributes, creating a feedback loop. Future work could also relax the assumption that these attributes are strictly orthogonal. While the examples in Table 1 show that these attributes can vary independently of each other, it would be interesting to use our model to examine how firm strategies would change if they were correlated, for instance, if highly salient issues also tended to be polarized.

Fourth, our model assumes that firms undertake CSR to maximize profits, but there is evidence that CSR may be driven by ideological preferences preferences and values of managers and employees (Chin et al., 2013; Gupta et al., 2017), as well as by institutional norms and pressures among elites (Marquis & Lee 2013; Marquis & Tilcsik, 2016). While our model cannot speak to situations where all firms are altruistically or ideologically driven, it is worth noting that an implication of our model is that if a firm were to take a minority position for ideological reasons,

even at the cost of its own profits, this would likely trigger a counter-response from its profit-maximizing rival. Such a move would thus not only leave the ideologically driven firm at a competitive disadvantage financially, it might also motivate a backlash against its social stance.

Finally, future work could test the empirical implications of our model. We envisage two potential routes for empirical research in this domain. One is to examine counterpositioning with respect to a single focal issue. For instance, scholars could exploit variance in issue visibility across industries or across time (Ioannou & Serafeim, 2015) as well as in the level of competition between firms to predict the likelihood of counterpositioning. A second approach is to conduct research across issues (Carmines & Stimson, 1980). Here, configurational perspectives (Misangyi et al., 2017) may be especially apt for identifying the competitive contexts in which distinct combinations of issue attributes make counterpositioning a viable choice for firms.

Conclusion

Using mathematical modeling, we develop a rigorous theory of how firms simultaneously compete in the product market and on CSR. We define two distinct attributes of a social issue—salience and agreement—and show that different combinations of these attributes lead to different equilibrium outcomes, determining both whether a firm chooses to undertake CSR and whether its rival follows, ignores, or opposes its actions. We further show that these outcomes are moderated by market competition, CSR substantiveness, and issue fragmentation. Our study thus extends prior work on strategic CSR by taking into account the contested nature of many social issues, while offering a range of novel predictions for future research.

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TABLES AND FIGURES

Table 1a: Inverse demand curves

Case	a_A	b_A	a_B	b_B	d
I. Neither firm undertakes CSR	α	1	α	1	γ
II. Firm A undertakes CSR	$\alpha\lambda(1+\phi)$	λ	α	1	$\gamma\lambda$
III. Both firms undertake CSR	$\alpha\lambda(1+\phi)$	λ	$\alpha\lambda(1+\phi)$	λ	$\gamma\lambda$
IV. Firm A acts for the majority, firm B acts for the minority	$\alpha\lambda(1+\phi)$	λ	$\alpha(1-\lambda)(1+\phi)$	$1-\lambda$	0

Note: General form of demand curve is $p_A = a_A - b_A q_A - d q_B;\ p_B = a_B - b_B q_B - d q_A$

Table 1b: Equilibrium quantities

Case	Firm A	Firm B
I.	$\frac{\alpha - c}{2+\gamma}$	$\frac{\alpha - c}{2+\gamma}$
II.	$\frac{2(\alpha\lambda(1+\phi) - c(1+\tau)) - \gamma\lambda(\alpha - c)}{4\lambda - \gamma^2\lambda^2}$	$\frac{2\lambda(\alpha - c) - \gamma\lambda(\alpha\lambda(1+\phi) - c(1+\tau))}{4\lambda - \gamma^2\lambda^2}$
III.	$\frac{\alpha\lambda(1+\phi) - c(1+\tau)}{(2+\gamma)\lambda}$	$\frac{\alpha\lambda(1+\phi) - c(1+\tau)}{(2+\gamma)\lambda}$
IV.	$\frac{2(1-\lambda)(\alpha\lambda(1+\phi) - c(1+\tau))}{4\lambda(1-\lambda)}$	$\frac{2\lambda(\alpha(1-\lambda)(1+\phi) - c(1+\tau))}{4\lambda(1-\theta\lambda)}$

Note: General solution is $q_A^* = \frac{2b_B(a_A - c_A) - d(a_B - c_B)}{4b_A b_B - d^2}$; $\pi_A^* = {q_A^*}^2 b_A$

Table 2: Summary of equilibrium scenarios

Case	I	II	III	IV
Equilibrium	Neither firm undertakes CSR	Firm A undertakes CSR (for majority); firm B stays neutral	Both firms undertake similar CSR (for the majority position)	Firms undertake opposing CSR actions
Type of Issue	Low salience, low agreement	Moderate salience, low / moderate agreement	Moderate to high salience, high agreement	High salience, low agreement
Conditions	$\min(\bar{\phi}, \dot{\phi}) \geq \phi$	$\hat{\phi} \geq \phi > \dot{\phi}$	$\bar{\phi} \geq \phi > \hat{\phi}$	$\phi > \bar{\phi}$
Effect of substantiveness (τ)	More likely when substantive action is required	More likely when substantive action is required	Less likely when substantive action is required	Less likely when substantive action is required
Effect of Competition (γ)	Less likely in more competitive markets	More likely in more competitive markets	Less likely in more competitive markets	More likely in more competitive markets
Effect of Issue Fragmentation (w)	More likely for fragmented / multidimensional issues	Less likely for fragmented / multidimensional issues	Slightly less likely for fragmented / multidimensional issues	Less likely for fragmented / multidimensional issues
Effect of issue pervasiveness (θ)	More likely for fringe issues, especially with low agreement	More likely for fringe issues, especially with low agreement	Less likely for fringe issues, especially with low agreement	Less likely for fringe issues
Example	Death penalty	Animal Cruelty	Human Trafficking	LGBTQ rights

Table 3: Empirical Predictions

	Moderating effect of:			
Proposition	**Salience**	**Agreement**	**Competition**	**Subtantiveness**
1a: Probability of CSR increases with issue salience		1b: U-shaped relationship (weakest with high agreement, strongest with moderate agreement)	1c: stronger with greater competition	1d: stronger for more substantive CSR
2a: Probability of competitive advantage from CSR increases with issue salience		2b: stronger with low agreement	2c: stronger with greater competition	2d: stronger for more substantive CSR
3a: Probability of CSR increases with issue agreement	3b: stronger with low salience		3c: stronger with less competition	3d: stronger for less substantive CSR
4a: Probability of competitive advantage from CSR decreases with issue agreement			4b: stronger with greater competition	4c: stronger for less substantive CSR
5a: Probability of CSR increases with product market competition	5b: stronger with high salience	5c: stronger with low agreement		5d: stronger for less substantive CSR
6a: Probability of competitive advantage from CSR increases with competition	6b: stronger with high salience	6c: stronger with low agreement		

Figure 1: Equilibrium with maximum competition ($\gamma = 1$), no cost ($\tau = 0$)

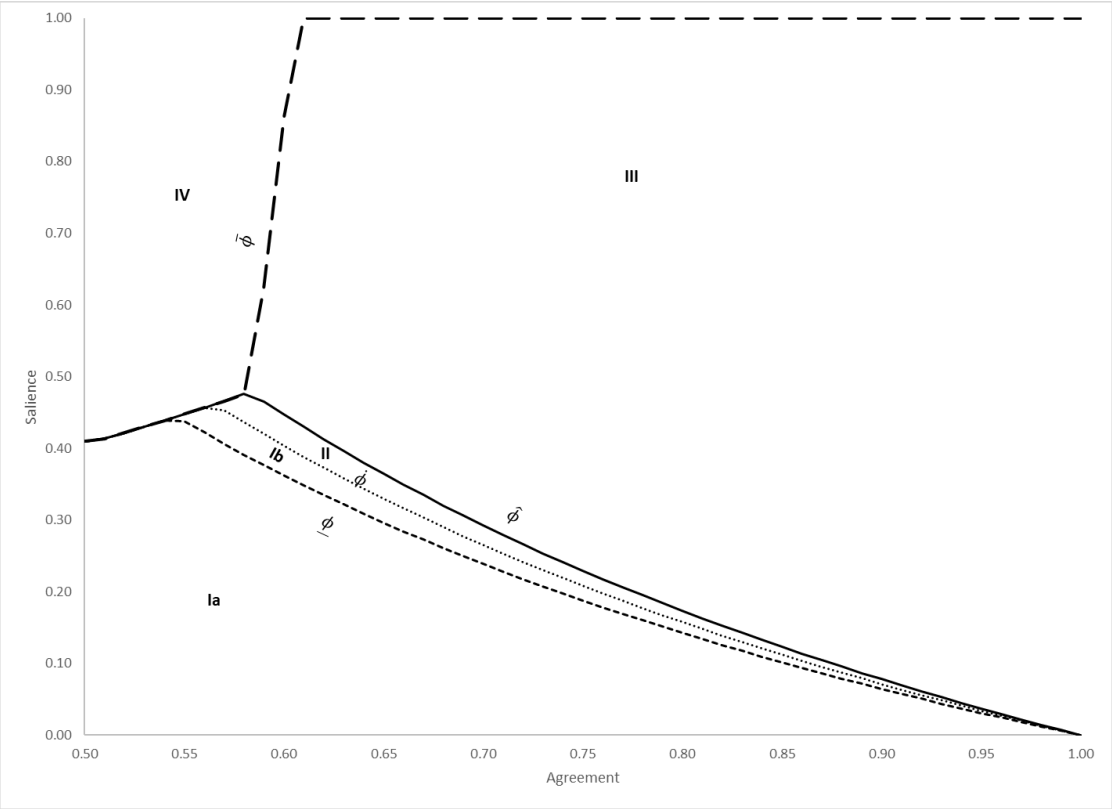
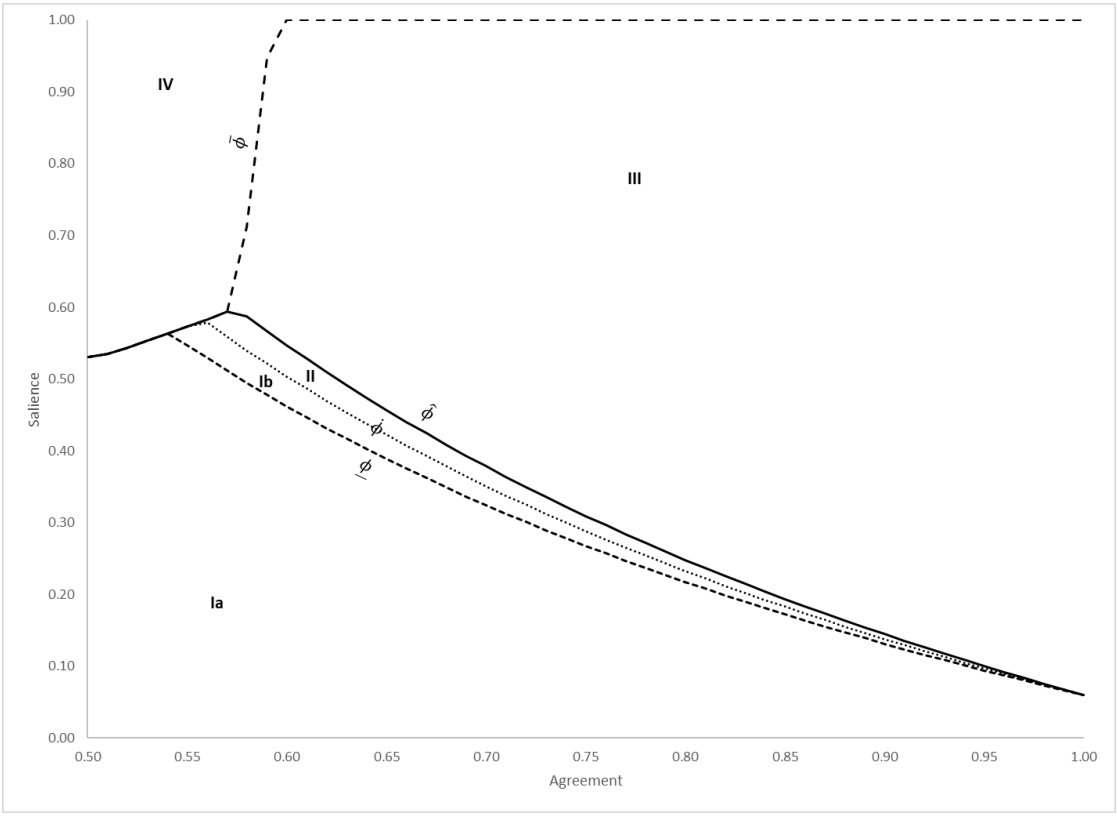
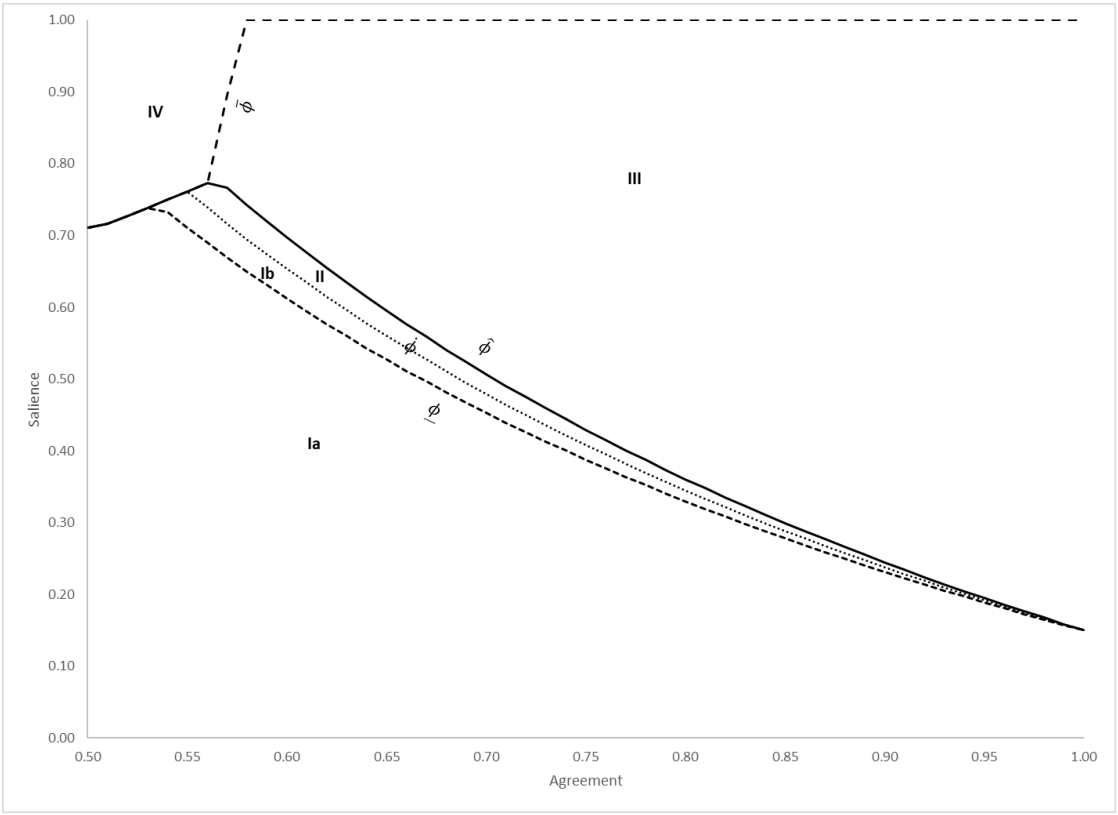


Figure 2: Effect of increasing cost

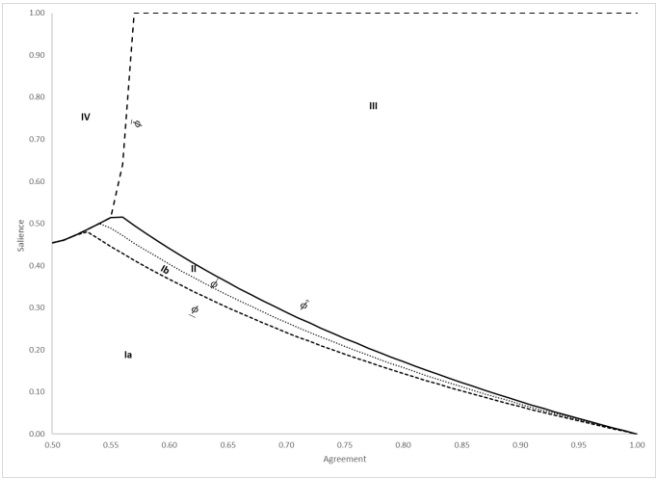


a. Moderate cost ($\boldsymbol{\tau = 0.2}$)

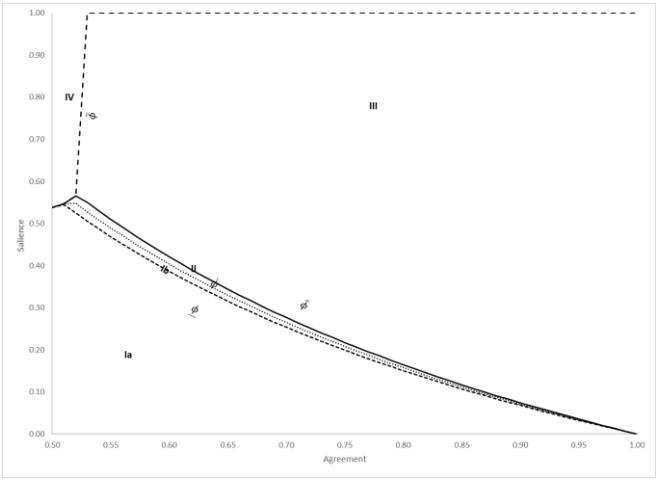


b. High cost ($\boldsymbol{\tau = 0.5}$)

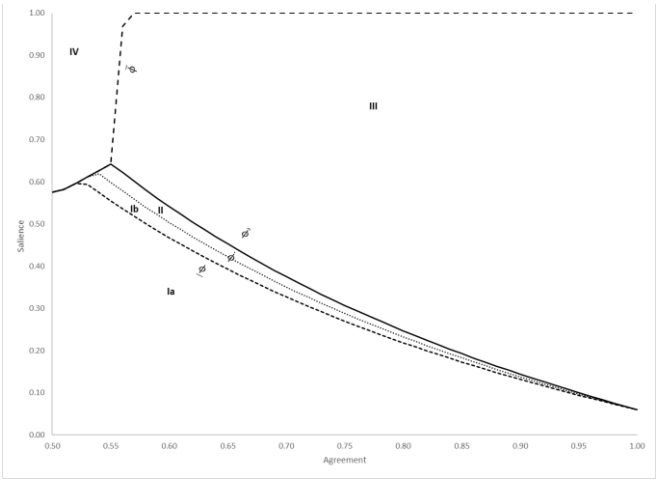
Figure 3: Moderating effect of consumer market competition



a. Moderate competition ($\gamma = 0.6$)

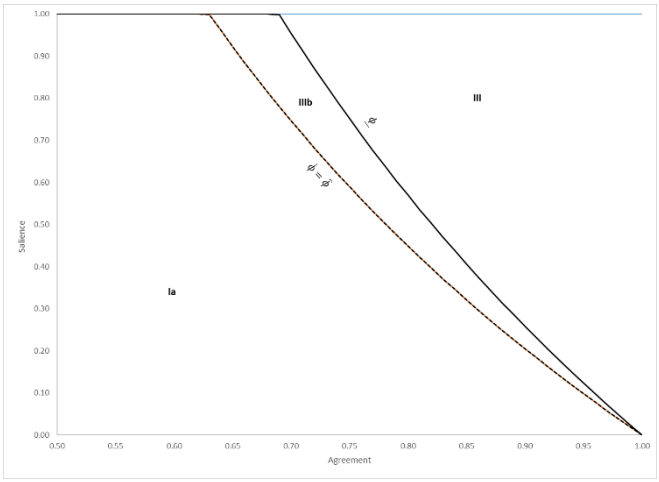


b. Low competition ($\gamma = 0.2$)

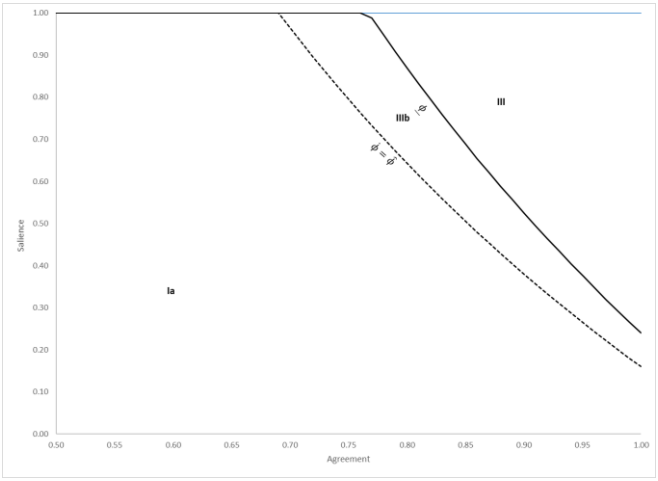


c. Moderate cost ($\tau = 0.2$) and moderate competition ($\gamma = 0.6$)

Figure 4: Model Extensions



a. Effect of issue fragmentation – symbolic action ($w = 0.5, \tau = 0$)



b. Effect of issue fragmentation – substantive action ($w = 0.5, \tau = 0.2$)

APPENDICES

Appendix 1: Derivation of Inverse Demand Curves

Utility functions for the average consumer

As specified in the main text, the baseline utility function for the representative consumer is:

$$U = \alpha(q_A + q_B) - \frac{1}{2}({q_A}^2 + {q_B}^2 + 2\gamma q_a q_b) + m$$

If neither firm undertakes CSR, this is the relevant utility function. Now, consider the other cases:

Case II: Firm A supports the majority position, firm B stays neutral

For the fraction (λ) of consumers who hold the majority position, the utility function is now:

$$U_\lambda = \alpha(1 + \phi)q_A + \alpha q_B - \frac{1}{2}({q_A}^2 + {q_B}^2 + 2\gamma q_a q_b) + m$$

For the remaining $(1 - \lambda)$ consumers, who hold the minority position, and will therefore no longer consider buying from firm A, the utility function is now:

$$U_{1-\lambda} = \alpha q_B - \frac{1}{2}{q_B}^2 + m$$

Combining these two together, we get the utility function for the average consumer:

$$\overline{U} = \lambda U_\lambda + (1 - \lambda)U_{1-\lambda}$$

$$= \alpha(\lambda(1 + \phi)q_A + q_B) - \tfrac{1}{2}(\lambda({q_A}^2 + 2\gamma q_a q_b) + {q_B}^2) + m$$

Case III: Both firms support the majority position

For the fraction (λ) of consumers who hold the majority position, the utility function is now:

$$U_\lambda = \alpha(1 + \phi)(q_A + q_B) - \frac{1}{2}({q_A}^2 + {q_B}^2 + 2\gamma q_a q_b) + m$$

For the remaining $(1 - \lambda)$ consumers, who hold the minority position, and will therefore no longer

consider buying from either firm, the utility function is now:

$$U_{1-\lambda} = m$$

Combining these together, we get the utility function for the average consumer:

$$\overline{U} = \lambda U_{\lambda} + (1-\lambda)U_{1-\lambda}$$

$$= \alpha\lambda(1+\phi)(q_A + q_B) - \frac{\lambda}{2}({q_A}^2 + {q_B}^2 + 2\gamma q_a q_b) + m$$

Case IV: Firm A supports the majority position; firm B supports the minority position

For the fraction (λ) of consumers who hold the majority position, the utility function is now:

$$U_{\lambda} = \alpha(1+\phi)q_A - \frac{1}{2}{q_A}^2 + m$$

For the remaining $(1-\lambda)$ consumers, who hold the minority position, the utility function is now:

$$U_{1-\lambda} = \alpha(1+\phi)q_B - \frac{1}{2}{q_B}^2 + m$$

Combining these two together, we get the utility function for the average consumer:

$$\overline{U} = \lambda U_{\lambda} + (1-\lambda)U_{1-\lambda}$$

$$= \alpha(\lambda(1+\phi)q_A + (1-\lambda)(1+\phi)q_B) - \frac{1}{2}\left(\lambda{q_A}^2 + (1-\lambda){q_B}^2\right) + m$$

Deriving inverse demand curves

For the baseline case (Case I), differentiating the average utility function with respect to q_A and recalling that m is the numeraire good, gives us:

$$p_A = \alpha - q_A - \gamma q_B$$

Similarly, differentiating with respect to q_B yields

$$p_B = \alpha - q_B - \gamma q_A$$

A similar procedure applied to the average utility function in all the other three cases yields the inverse demand curves shown in Figure 1a.

Appendix 2: General equilibrium solution

Consider two firms with inverse demand curves of the form:

$$p_A = a_A - b_A q_A - d q_B;\ p_B = a_B - b_B q_B - d q_A$$

For firm A, taking profit $\pi_A = (p_A - c_A) q_A$ and maximizing π_A w.r.t q_A gives us the best response function:

$$q_A^*(q_B) = \frac{a_A - c_A - d q_B}{2 b_A}$$

Similarly, the best response function for firm B is:

$$q_B^*(q_A) = \frac{a_B - c_B - d q_A}{2 b_B}$$

Solving simultaneously, we get:

$$q_A^* = \frac{2 b_B (a_A - c_A) - d(\alpha_B - c_B)}{4 b_A b_B - d^2};\ q_B^* = \frac{2 b_A (a_B - c_B) - d(\alpha_A - c_A)}{4 b_A b_B - d^2}$$

Appendix 3: Threshold values

General threshold values

The profit realized by firm A in case i has the general form: $\pi^{*i}_A = b^i_A \left(\frac{f^i_A \phi + g^i_A}{h^i}\right)^2$

Where the values of f^i, g^i, h^i are as follows (from the equilibrium quantities shown in Table 1b):

Case	f^i_A	g^i_A	f^i_B	g^i_B	h^i
I	0	$\alpha - c$	0	$\alpha - c$	$2 + \gamma$
II	$2\alpha\lambda$	$\alpha\lambda(2-\gamma) - c(2(1+\tau) - \lambda\gamma)$	$-\gamma\alpha\lambda^2$	$\lambda(\alpha(2-\gamma\lambda) - c(2-\gamma(1+\tau)))$	$4\lambda - \gamma^2\lambda^2$
III	$\alpha\lambda$	$\alpha\lambda - c(1+\tau)$	$\alpha\lambda$	$\alpha\lambda - c(1+\tau)$	$\lambda(2+\gamma)$
IV	$2\alpha\lambda(1-\lambda)$	$2(1-\lambda)(\alpha\lambda - c(1+\tau))$	$2\alpha\lambda(1-\lambda)$	$2\lambda(\alpha(1-\lambda) - c(1+\tau))$	$4\lambda(1-\lambda)$

Dropping subscripts for convenience, we can then define a threshold value of salience $\phi^{i,j}$ where $\pi^{*i} = \pi^{*j}$, which takes the value:

$$\phi^{i,j} = \frac{g^j h^i \sqrt{b^j} - g^i h^j \sqrt{b^i}}{f^i h^j \sqrt{b^i} - f^j h^i \sqrt{b^j}}$$

Threshold values for cases

Case IV

Case IV prevails if and only if:

- Firm B prefers Case IV to Case II and Case III: $\pi_B^{*IV} > \pi_B^{*II}$ & $\pi_B^{*IV} > \pi_B^{*III}$, i.e. $\phi > \max(\phi_B^{II,IV}, \phi_B^{III,IV})$
- Firm A prefers Case IV to Case I: $\pi_A^{*IV} > \pi_A^{*I}$, i.e., $\phi > \phi_A^{I,IV}$

This is the case where $\phi > \bar{\phi}$ where

$\bar{\phi} = \max(\phi_B^{II,IV}, \phi_B^{III,IV}, \phi_A^{I,IV})$ if $\gamma > \bar{\gamma}$

or ∞ if $\gamma \leq \bar{\gamma}$

where $\bar{\gamma}$ is the minimum value of competition between firms for case IV to be comparatively profitable. $\bar{\gamma} = 2\sqrt{\frac{\lambda}{1-\lambda}} - 1$.

Case III

Case III prevails if and only if:

- Firm B prefers Case III to Case II and Case IV: $\pi_B^{*III} > \pi_B^{*II}$ & $\pi_B^{*IV} \leq \pi_B^{*III}$, i.e.,$\phi_B^{III,IV} \geq \phi > \phi_B^{II,III}$
- Firm A prefers Case III to Case I: $\pi_A^{*III} > \pi_A^{*I}$, i.e., $\phi > \phi_A^{I,III}$

Since $\pi_A^{*III} = \pi_B^{*III}$ and $\pi_A^{*I} = \pi_B^{*I}$, this is the case where $\bar{\phi} \geq \phi > \hat{\phi}$ where $\hat{\phi} = \min(\phi_B^{II,III}, \phi_B^{II,IV})$

Note: this follows from the fact that $\phi_A^{I,III} = \phi_B^{I,III} \leq \phi_B^{II,III}$

Case II

Case II prevails if and only if:

- Firm B prefers Case II to Case III and Case IV: $\pi_B^{*III} \leq \pi_B^{*II}$ & $\pi_B^{*IV} \leq \pi_B^{*II}$, i.e., $\phi \leq \min(\phi_B^{II,III}, \phi_B^{II,IV})$
- Firm A prefers Case II to Case I: $\pi_A^{*II} > \pi_A^{*I}$, i.e, $\phi > \phi_A^{I,II}$
- Firm A does better than Firm B in Case II: $\pi_A^{*II} > \pi_B^{*II}$

This is the case where $\hat{\phi} \geq \phi > \dot{\phi}$, where $\dot{\phi} = \min\left(\overline{\phi}, \frac{g_B^{II} - \sqrt{\lambda} g_A^{II}}{\sqrt{\lambda} f_A^{II} - f_B^{II}}\right)$

Case Ib

Case Ib prevails if and only if:

- Firm A is better off undertaking CSR than not: $\pi_A^{*II} > \pi_A^{*I}$
- Firm B does no worse than firm A if its stays neutral while firm A pursues CSR: $\pi_B^{*II} \geq \pi_A^{*II}$

This is the case where $\dot{\phi} \geq \phi > \underline{\phi}$, where $\underline{\phi} = \min(\phi_A^{I,II}, \bar{\phi})$

Case Ia

Case Ia prevails if:

- Firm A prefers Case I to Case II and Case IV: $\pi_A^{*II} \leq \pi_A^{*I}$ & $\pi_A^{*IV} \leq \pi_A^{*I}$

This is the case where $\phi \leq \underline{\phi}$

Appendix 4: Measuring Issue Salience & Agreement

In this appendix, we describe two different approaches to measuring issue salience & agreement. We used these approaches to measure and compare the levels of salience and agreement for the four issues—capital punishment, animal cruelty, human trafficking, and LGBTQ rights—that we use as case examples in our main manuscript. In addition to confirming our claims as to the position of our four example issues in parameter space, this appendix thus also demonstrates how the key parameters in our model may be practically operationalized, thus showing how our theoretical model may be used for future empirical work.

Our first approach was to measure salience and agreement using platforms of political parties. This measure is useful because it allows for a measure of polarization and salience, wherein agreement over issues is highly representative of agreement in the population over these issues (Pew 2014). Furthermore, fringe issues and those that are not salient are unlikely to be overrepresented. This measure is also useful because when political parties highlight issues that differentiate the voting population, they contribute to increasing both salience and polarization on the issue. To construct a measure of issue salience and agreement, we investigated the extent to which each issue was mentioned in the 2016 programs of the Democrat and Republican parties[17]. We counted each reference to "LGBT" (or, "marriage" in the case of the Republican program), human-related "trafficking", "capital punishment" (or, "death penalty"), and "animals." Subsequently, we coded whether the text was supporting or opposing the issue. We display the results of our investigation in Figure A4.1, where the length of a bar represents the salience of the focal issue within the party programs, and negative scores represent opposition to the issue while positive scores represent support. LGBT rights are simultaneously salient and polarizing. Human trafficking is salient, but there is consensus in opposition to it. Animal welfare

[17] The Republican Party did not publish a complete program for the 2020 election cycle.

is not salient, and disagreement is not discernible. Capital punishment is a polarizing issue, but it lacks salience.

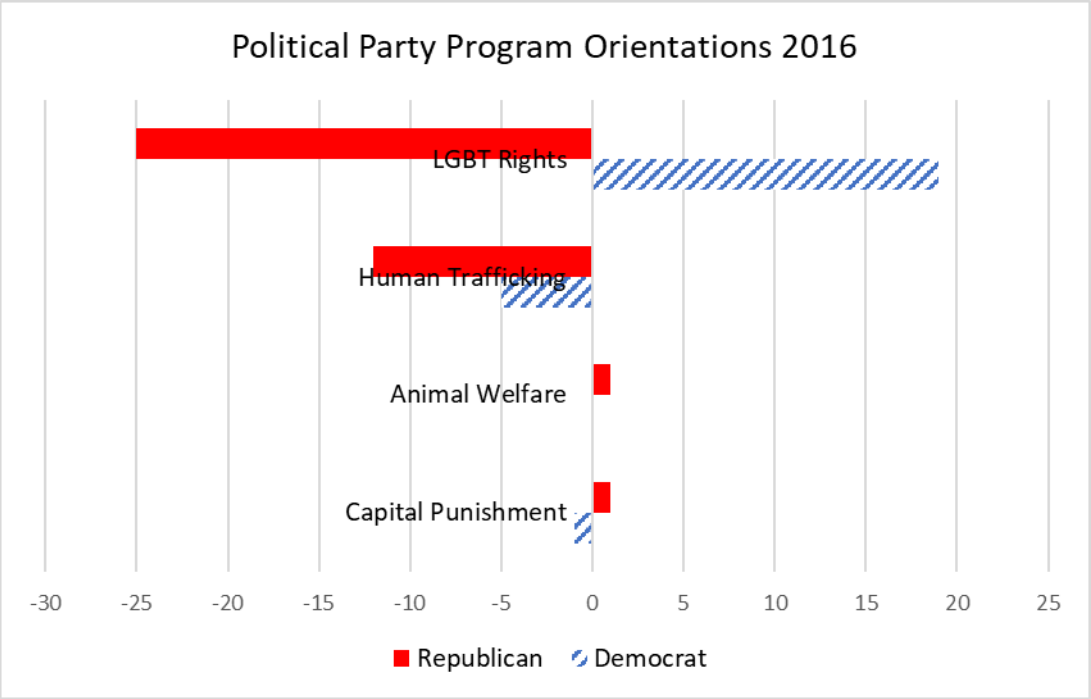


Figure A4.1 Issue Salience & Agreement by Political Party Program

As a secondary approach, we assessed the coverage of the same issues across major U.S. newspapers over the five-year period 1 December 2015 to 30 November 2020. Informed by the AllSides rating of media bias (AllSides, 2020), we selected two right-leaning publications (New York Post, Wall Street Journal) and two left-leaning publications (New York Times, Washington Post). We noted salience by the number of articles published in the five-year window addressing each theme (Table A4.1). Based on the aggregate number of articles and consistent with our first measure (party platrofms), LGBT-related topics are highly salient, whereas animal cruelty topics are much less so. Capital punishment and human trafficking lie in the mid-range. To capture agreement, we downloaded the corpus of 913 articles related to each issue the four publications and coded the sentiment of each publication's articles per issue using the hostility category of language in the Harvard-IV dictionary. The hostility category contains 833 words indicating

opposition; the measure reflects the percentage of words in a text that belong to the category. Hostility does not necessarily imply negativity towards an issue because hostile language can be used by issue proponents too. Rather, our interest lies in whether the publications converge on the same tenor. In Figure A4.2, we plot the degree of hostility in each publication's coverage. Notably, the published articles converge in their treatment of the issue of human trafficking and the issue of animal cruelty (with the exception of the Wall Street Journal, but it published only three articles on the theme). Here too, consistent with party platforms, divergence is more noticeable for capital punishment and LGBT-related issues.

Each of these methods has limitations when it comes to assessing salience and agreement – in representativeness, generalizability and sampling. Opinion polls – where respondents are prompted by the surveyor and asked to express support for or opposition to pre-determined questions are useful to assess polarization, but not salience. Media mentions and internet searches seem useful in assessing salience, but both are likely to overestimate the salience of fringe issues in which a small minority of individuals can be produce a large number of observations. Because politicians use "positional issues" to appeal to voters, political advertising and party platforms are likely to capture both salience and agreement. However, political discourse may conflate positions on one issue with positions on other issues (e.g. Baldassari & Gelman 2008). That is why we feel it is important to triangulate across both approaches when evaluating salience and agreement, as we do here.

Table A4.1 Count of issue-related articles (salience)

	New York Post	Wall Street Journal	New York Times	Washington Post	Total
Capital punishment	8	16	58	50	132
Animal cruelty	29	3	20	22	74
LGBT/LGBTQ	170	37	11	328	546
Human/child trafficking	18	13	68	62	161

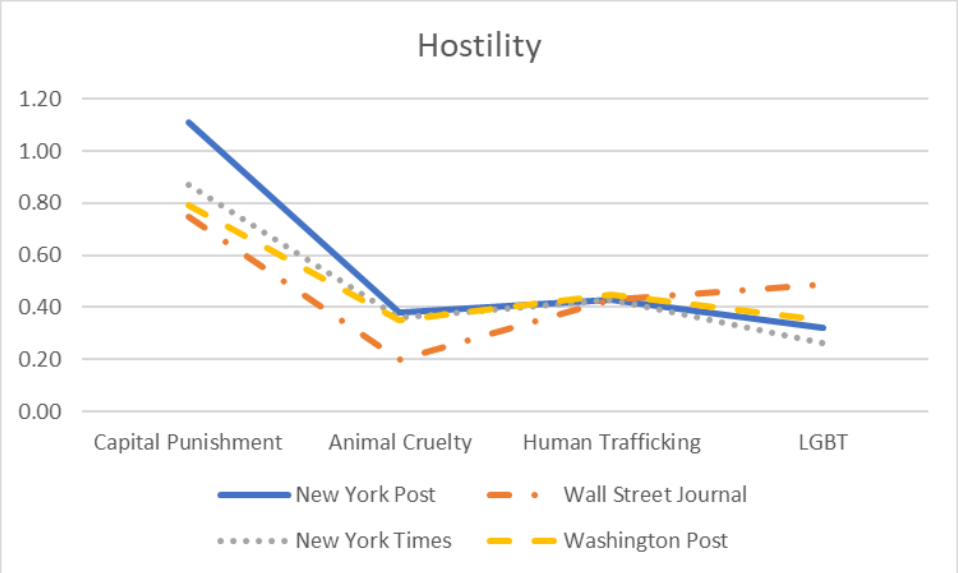


Figure A4.2 Average Hostility of Articles by Newspaper & Issue (Agreement)

Appendix 5: Chick-Fil-A's performance

In this appendix, we plot the revenue of Chick-fil-A against that of KFC, the other major fried-chicken chain, using data from QSR Magazine on both aggregate revenue and per-unit revenue in the US from 2010 to 2016. The graphs thus show the trends in Chick-fil-A's sales relative to its closest competitor in the years immediately before and long after its decision to counterposition itself as an opponent of LGBTQ rights in 2012 (shown as a dashed line). We acknowledge that revenue is not profit; unfortunately, reliable profit numbers on the company are hard to obtain since it is private. As discussed in the main manuscript, these graphs are not meant to claim a causal relationship between Chick-fil-A's stance on LGBTQ rights and its subsequent performance; simply to show how Chick-fil-A has performed (relative to competition) over the last decade.

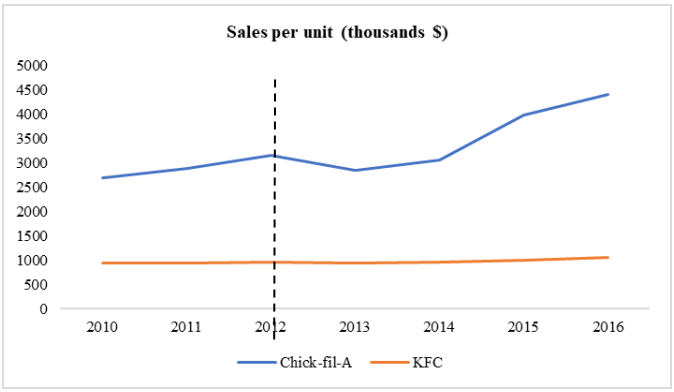


Figure A5.1. Chick-fil-A Revenue per Unit

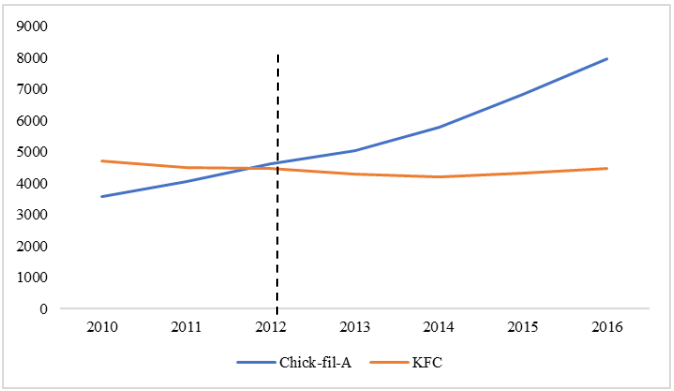


Figure A5.2 Chick-fil-A Total Revenue

Appendix 6: Multiposition or Fragmented Issues

In this Appendix, we consider the case where the focal issue is fragmented and firms can take multiple positions on one side of the issue. Suppose that every issue has multiple potential positions, and a firm undertaking CSR must choose one position. Let the set of possible positions be represented by a circle of unit circumference, with customers who potentially support the firm's CSR being distributed uniformly around the circle based on their preferences (Heyes and Martin, 2015; 2017). Assume that a customer receives utility ϕ (as before) only if the firm taking a stand takes the precise position that the customer supports. As the firm's position grows more distant from the customer's preferred position, her utility decreases linearly, until at a distance $\frac{w}{2}$ from the firm's position, the customer no longer receives any utility from the firm's CSR. The parameter w thus reflects the potential coverage of the issue (and those who support it) by the firm, with $0 < w \leq 1$. Note that w is also an inverse measure of the extent of issue fragmentation: if $w = 1$, all supporters of the issue receive some utility from a firm acting for it, no matter how distant its position may be from their preferred position; conversely, if w is close to 0, then any supporter cares only about a narrow set of sub-issues within the larger issue and only receives utility if the firm takes a position on those sub-issues. A customer outside the w coverage range of the firm's position will be indifferent to the firm's actions in support of the issue; she will still buy from the firm, but will not receive any additional utility from the firm's CSR.

This introduction of multiple issue positions (or issue fragmentation) has two effects:

- The average utility received by the λ customers who support the issue if Firm A acts for it is now only $\frac{w\phi}{2}$. Similarly, if firm B chooses to act for the minority position, the average utility received by the $(1-\lambda)$ customers who oppose the issue is also (symmetrically) $\frac{w\phi}{2}$.

- If firm B chooses to follow firm A by acting for the issue, it will logically choose a position that is diametrically opposite to that of firm A so as to put as much distance between them as possible. By doing so, it will potentially boost the average utility that supporters of the majority position realize, since those who were relatively far from firm A (on the other side of the circle) will now have a champion closer to them. Specifically, average utility received by the $\theta\lambda$ customers will rise to $\frac{\phi}{2}$ if $w \geq \frac{1}{2}$ or $w\phi$ if $w < \frac{1}{2}$.

This will change the coefficients in the model as follows:

Case	$a^i_{A\_alt}$	$f^i_{A\_alt}$	$a^i_{B\_alt}$	$f^i_{B\_alt}$
II	$\alpha\lambda(1+\frac{w\phi}{2})$	$\alpha\lambda w$	α	$\frac{-\gamma\alpha\lambda^2 w}{2}$
III	$\alpha\lambda(1+\min(w,\frac{1}{2})$	$\min\left(w,\frac{1}{2}\right).\alpha\lambda$	$\alpha\lambda(1+\min(w,\frac{1}{2})$	$\min\left(w,\frac{1}{2}\right).\alpha\lambda$
IV	$\alpha\lambda(1+\frac{w\phi}{2})$	$\alpha\lambda(1-\lambda)w$	$\alpha(1-\lambda)(1+\frac{w\phi}{2})$	$\alpha\lambda(1-\lambda)w$

All other values and parameters will remain the same, and the same solution concepts will apply.

Appendix 7: Issue Pervasiveness

In this appendix, we consider the case where only a fraction θ cares about the issue, with the remaining $1-\theta$ fraction of consumers being indifferent. If that were the case, a firm that undertook CSR in support of the majority position would retain a fraction $\eta = 1-\theta(1-\lambda)$ of customers, and the average utility function for the overall population would be

$$\overline{U} = (1-\theta)U + \theta\lambda U_{\lambda} + \theta(1-\lambda)U_{1-\lambda}$$

since the $1-\theta$ fraction of indifferent consumer's utility function would be unaffected by firms' CSR choices. Table A7.1 and A7.2 show the demand curves and the inputs into the threshold values in this case. Replacing these values in Table 1a and Table A3.1 respectively allows us to incorporate the effect of pervasiveness in our model. Notice that the model presented in our main manuscript may be thought of as a special case of this more general model where $\theta = 1$.

These tables show that reducing pervasiveness makes it more likely that neither firm will pursue CSR (Case I), especially where agreement is low. This follows from the fact that the upside to a firm from undertaking CSR is now lower, given that only a fraction $\lambda\theta$ will reward it for supporting the majority position, so the salience among these consumers required to motivate firm A to invest in CSR is obviously higher[18]. Further, decreasing pervasiveness makes Case II more likely and Case IV less likely. As pervasiveness decreases, the rewards to taking a minority position also decrease: in part because now only $(1-\lambda)\theta$ fraction of consumers will reward such a position; and in part because even if firm B takes a minority position it will still be directly competing with firm A for the $(1-\theta)$ subset of indifferent consumers, and this will constrain its ability to charge higher prices to the consumers who support its (minority) stand. In sum, decreasing pervasiveness has an effect similar to decreasing product-market competition.

[18] For the purposes of this extension, we assume that θ is independent of ϕ, i.e., ϕ represents the average utility from CSR derived by the θ fraction of consumers who care about the issue.

The intuition is that both effects make CSR less effective as a means of differentiation: as γ decreases, the two firms are more differentiated anyway, so CSR is less valuable to either firm; as θ decreases, the firms remain undifferentiated even if they counterposition, at least for those who are indifferent to the issue.

Table A6.1: Inverse demand curves with pervasiveness

Case	a_A	b_A	a_B	b_B	d
I. Neither firm undertakes CSR	α	1	α	1	γ
II. Firm A undertakes CSR	$\alpha(1-\theta+\theta\lambda(1+\phi))$	η	α	1	$\gamma\eta$
III. Both firms undertake CSR	$\alpha(1-\theta+\theta\lambda(1+\phi))$	η	$\alpha(1-\theta+\theta\lambda(1+\phi))$	η	$\gamma\eta$
IV. Firm A acts for the majority, firm B acts for the minority	$\alpha(1-\theta+\theta\lambda(1+\phi))$	η	$\alpha(1-\theta+\theta(1-\lambda)(1+\phi))$	$1-\theta\lambda$	$\gamma(1-\theta)$

Note: General form of demand curve is $p_A = a_A - b_A q_A - d q_B;\ p_B = a_B - b_B q_B - d q_A; \eta = 1 - \theta(1-\lambda)$

Table A6.2: Inputs for threshold values

Case	f_A^i	g_A^i	f_B^i	g_B^i	h^i
I	0	$\alpha - c$	0	$\alpha - c$	$2+\gamma$
II	$2\alpha\theta\lambda$	$\alpha\eta(2-\gamma) - c(2(1+\tau) - \eta\gamma)$	$-\gamma\eta\alpha\theta\lambda$	$\eta(\alpha(2-\gamma\eta) - c(2-\gamma(1+\tau)))$	$4\eta - \gamma^2\eta^2$
III	$\alpha\theta\lambda$	$\alpha\eta - c(1+\tau)$	$\alpha\theta\lambda$	$\alpha\eta - c(1+\tau)$	$\eta(2+\gamma)$
IV	$\alpha\theta(2\lambda(1-\theta\lambda) - \gamma(1-\theta)(1-\lambda))$	$\alpha(1-\theta\lambda)(2\eta - \gamma(1-\theta)) - c(2(1+\tau)(1-\theta\lambda) - \gamma(1-\theta))$	$\alpha\theta(2\eta(1-\lambda) - \gamma(1-\theta)\lambda)$	$\alpha\eta(2(1-\theta\lambda) - \gamma(1-\theta)) - c(2\eta(1+\tau) - \gamma(1-\theta))$	$4\eta(1-\theta\lambda) - \gamma^2(1-\theta)^2$

: ${\pi^*}_A^i = b_A^i\left(\frac{f_A^i\phi + g_A^i}{h^i}\right)^2$. Dropping subscripts, $\phi^{i,j} = \frac{g^j h^i\sqrt{b^j} - g^i h^j\sqrt{b^i}}{f^i h^j\sqrt{b^i} - f^j h^i\sqrt{b^j}}$, where $\phi^{i,j}$ is the value of salience for which ${\pi^*}^i = {\pi^*}^j$