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Policy and Research Related to Consumer Rebates: A Comprehensive Review

Cornelia Pechmann and Tim Silk

The authors present the first comprehensive, multidisciplinary review of consumer rebates that includes federal regulations, state laws, and academic research. They discuss four topics that have been the foci of consumer concerns and policy reform: rebate advertising, rebate redemption disclosures, rebate redemption processes, and rebate payment processes. With respect to each of these four topics, the authors identify federal guidelines for rebates by reviewing the 18 Federal Trade Commision rebate-related complaints and the 18 associated consent decrees. Furthermore, they discuss 15 rebate laws from 11 U.S. states, 7 of which were enacted since 2007. In addition, they review academic research related to rebates from diverse literatures including marketing, consumer behavior, psychology, and economics and identify research gaps. This information should help policy makers evaluate rebate policies to assess whether the policies are evidence based, and it should help academics identify unanswered research questions that are important to policy makers.

Keywords: rebates, consumer behavior, consumer welfare, Federal Trade Commission
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Rebates offer consumers the benefit of receiving a monetary discount after purchase contingent on accurate and timely completion and submission of the redemption form, by mail or Internet, and deposit of payment (Jolson, Weiner, and Rosecky 1987; Rothschild 1987; Tat, Cunningham, and Babakus 1988). Rebates have become a prevalent form of price promotion. Although exact figures are difficult to obtain due to industry fragmentation and lack of a rebate industry association, the estimated value of rebates offered in the United States ranges from $4 billion to $10 billion per year (Edwards 2007). Rebates have several characteristics that differentiate them from other promotions such as coupons and temporary price reductions. With rebates, consumers must initially pay a higher prepromotion price, submit a redemption form, and then wait for and cash the payment; with coupons and temporary price reductions, consumers instantly receive the postpromotion price. Furthermore, rebates require consumers to exert effort after purchase to redeem and cash, whereas coupons require effort beforehand to obtain and present the coupon at the store. Finally, rebates, like coupons, are paid only to those who exert effort, whereas temporary price reductions are given to all buyers.

Rebates offer firms several benefits. First, firms can sell goods at two price points simultaneously to all consumers in a store: those who do not redeem the rebate pay the before-rebate price, and those who do redeem the rebate pay the after-rebate price. Thus, firms may be able to offer steeper and/or more frequent price reductions with rebates rather than temporary price promotions (Chen, Moorthy, and Zhang 2005). Moreover, firms can capitalize on consumers' propensity to buy a product because of a rebate and later opt not to redeem (Soman 1998; Zauberman and Lynch 2005). This nonredemption is often referred to as "breakage" or "slippage" (Chen, Moorthy, and Zhang 2005). Firms can also structure the rebate terms in ways that may benefit them (e.g., in most states, firms can promise payment within several months). Most retailers like rebates as well, because customers react favorably to the often dramatically lower prices (Federal Trade Commission [FTC] 2007b).

However, firms must exert more time and effort to manage rebates than other promotions and must wait longer to assess the financial outcomes. They must review the rebate submissions, then pay the rebates, and finally wait for payments to be deposited (FTC 2007b). Thus, firms often use fulfillment houses to perform these functions, which can lead to problems such as weak coordination or poor customer service. In addition, consumer fraud is more likely with rebates, including attempts to obtain multiple rebates from one purchase and theft of rebate checks (Joint Industry Rebate Fraud Task Force 1995). Finally, if enough consumers are angered by a rebate offer, this can tarnish the image of the sponsoring firm and/or retailer.

Although rebates have become popular, consumers have expressed growing dissatisfaction with them (Edwards 2007). For example, consumer complaints about rebates to the Better Business Bureau rose 278%, from 964 in 2001 to 3,641 in 2005 (Odell 2006). Firms have also struggled with

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numerous problems related to rebates, including consumer fraud, consumer redemption errors, and unexpectedly high redemption rates (Joint Industry Rebate Fraud Task Force 1995). However, specific complaints and concerns about rebates have not been systematically documented as yet.

In summary, rebates are a unique and popular form of promotion, and they offer consumers and firms substantial benefits; however, they also generate a host of complaints and problems. This study presents the first comprehensive, multidisciplinary review of consumer rebates that includes both U.S. federal and state public policies and academic research findings. We begin by describing consumer and policy maker concerns regarding (1) rebate advertising, (2) rebate redemption disclosures, (3) rebate redemption processes, and (4) rebate payment processes. Next, we discuss federal regulations and state laws aimed at addressing each concern. Then, we review the academic research in marketing, consumer behavior, psychology, and economics related to each concern. Finally, we identify research gaps and future research directions. We adopt a rather novel approach, in that marketing articles typically review academic research (Compeau and Grewal 1998; Grewal and Compeau 1992), whereas law review articles typically review laws and regulations (Edwards 2007). We integrate these two approaches because we believe this may be especially useful to policy makers, researchers, and consumers.

There is no comprehensive federal law on rebates, but the FTC has issued numerous complaints about them. These complaints are typically followed by consent decrees wherein firms consent to cease violative activities. Thus, we discuss the 18 federal complaints and consent decrees related to rebates. In addition, we discuss the 15 rebate laws from 11 different states, 7 of which were enacted since 2007. Finally, in the Web Appendix, we list the 35 rebate bills that have been considered by legislators from 19 states, because these bills document additional policy concerns and could portend future laws.

This study is meant to provide guidance to states in their rebate lawmaking and to raise the issue that perhaps a comprehensive federal rebate law is needed. By discussing the academic research related to each rebate regulation and law, we hope to assist policy makers and legislators in evaluating whether their past and proposed actions are evidence based (i.e., research based). By discussing each rebate regulation and law, we hope to direct researchers' attention to policy areas that have not received enough research attention, and we identify specific research gaps. Our main goal is to facilitate policy makers' use of academic research findings and academics' consideration of policy maker concerns regarding rebates.

Background on Federal and State Authority over Rebates

Federal rebate policies are governed by the FTC, which relies on Section 5(a) of the FTC Act prohibiting "unfair or deceptive acts or practices" in commerce (FTC 2007a). The FTC also relies on its Mail Order Rule, which is designed to prevent firms from misrepresenting when mail order goods will be shipped, including rebates (FTC 2011). This rule states that it is unfair or deceptive for a seller to solicit an order unless the seller has a reasonable basis to expect to ship the item: "(i) Within that time clearly and conspicuously stated in any such solicitation; or (ii) If no time is clearly and conspicuously stated, within thirty (30) days after receipt of a properly completed order from the buyer." If the FTC believes a firm is in violation, it will issue a complaint. Typically, the result is a consent decree wherein the firm stipulates to cease specific violative acts and practices. Although the decrees only pertain to the named firms, they provide important signals to other firms regarding what is considered violative. There have been 18 federal complaints about rebates with consent decrees: the first was in 1998 and the most recent was in 2009 (for details, see the Web Appendix.

The U.S. states exert authority over rebates using various state consumer protection clauses that prohibit unfair or deceptive acts or practices in commerce. Eleven of the 50 U.S. states (22%) have passed rebate laws. This means that firms must use different rebate programs depending on the state and that consumers benefit from different rebate offers and protections. Rebates are an active area of legislation: New York, North Carolina, Texas, and Washington all have comprehensive rebate laws that were passed between 2005 and 2009.

Rebate Advertisements

Concerns About Rebate Advertisements

No national survey or complaint content analysis has been performed to quantify consumers' concerns about rebates, but the major concerns are evident in the federal regulations and state laws in Table 1. One major concern is that rebate ads may not clearly and conspicuously convey relevant price information. Instead, the ads may unduly emphasize the lower after-rebate price without clearly conveying that this price is contingent on successful rebate redemption. A specific criticism is that many rebate ads do not conspicuously convey the higher before-rebate price that consumers must pay. Furthermore, many ads highlight the lower after-rebate price, perhaps without even mentioning the word "rebate" or the mail-in requirement. One result, as described by a consumer advocate, is that rebates "induce sticker swoon, the opposite of sticker shock, and entice consumers into buying products they might not always have been disposed to [buy]" (FTC 2007b, p. 62). If consumers do not successfully redeem the rebate, they may feel they have purchased something they could not afford or did not want at that price.

For example, in Figure 1, Panel A, the rebate ad simply says "$39.99 after rebate," so consumers are not even told the price they must initially pay. They must look on the retail shelf or checkout register to determine the before-rebate or purchase price. In Figure 1, Panel B, the rebate ad prominently highlights the lower after-rebate price of $99.99. Moreover, the ad claims "Save $20" without using the word "rebate." The consumer must read the fine print "$119.99 – $20.00 [MIR] = $99.99" and understand it means that the before-rebate price is $119.99 and that they must successfully redeem the $20 rebate to realize the $99.99 after-rebate price.

Table 1. A Summary and Comparison of the Rebate Regulations in the 18 Federal Consent Decrees and the 15 State Laws

Issue	Rebate Regulations	Federal Consent Decrees	State Laws
Rebate advertisements	Do not advertise the after-rebate price unless the rebate savings amount is also advertised.	*Buy.com Inc., In the Matter of* (2000); *Value America, In the Matter of* (2000)	None
	Do not advertise the after-rebate price unless the rebate is paid instantly.	None	CT 1988, RI 2007a
	Advertise the before-rebate price if 2+ rebates or if there is an additional price reduction.	*Buy.com Inc., In the Matter of* (2000); *Value America, In the Matter of* (2000)	None
	Advertise the before-rebate price.	None	CA 1991; NY 1994; OK 2004
	Advertise the mail-in rebate requirement.	None	MD 2008; NY 1994; OK 2004
Rebate redemption disclosures	Disclose the rebate redemption criteria xxx; see other columns for specifics.	In the ads if unusual and restrictive: *Buy.com Inc., In the Matter of* (2000); *FTC v. InPhonic* (2007); *Office Depot, In the Matter of* (2000); *Value American, In the Matter of* (2000); *Wofford, In the Matter of* (2002)	On the redemption form: NC 2007
	Disclose noncash payment forms and any related fees.	None	NY 2010
	Provide the redemption form in a timely fashion.	*FTC v. Capell* (2001); *USA v. Iomega* (1998)	NY 2005, 2006
	Provide the redemption form in the ad and at purchase.	None	ME 2005
Rebate redemption processes	Allow at least xxx days to submit a rebate redemption form (and no more than xxx months); see right column for specifics.	None	14 days: NY 2005; WA 2009 30 days (and no more than 6 months): NC 2007
	Notify of noncompliance when payment was promised or within 30 days and allow 30 days for corrections.	None	TX 2007
	Accept redemption forms from the same household.	None	RI 2007b
	Accept post-office boxes as valid addresses.	None	ND 2005
Rebate payment processes	Pay the rebate when specified or within xxx days; see other columns for specifics.	30 days: *FTC v. America Online* (2003); *American Telecom Services, Inc., In the Matter of* (2009); *FTC v. Capell* (2001); *FTC v. CompUSA* (2005); *FTC v. Granik* (2004); *FTC v. InPhonic* (2007); *FTC v. Memtek* (2000); *Philips Corporation, In the Matter of* (2002); *FTC v. Sharma* (2005); *Soyo, In the Matter of* (2007); *FTC v. UrbanQ* (2003); *FTC v. Umax* (2000); *Value America, In the Matter of* (2000); *Wofford, In the Matter of* (2002); *USA v. Iomega* (1998)	30 days: TX 2007 60 days: NC 2007, NY 2005 90 days: WA 2009
	Identify the mailer as a rebate check.	None	WA 2009

Notes: In *FTC v. Market Development Specialists* (2009), the firm was enjoined from offering rebates. For details, see the Web Appendix.

Figure 1. Examples of Rebate Advertisements

A: Lacking the Before-Rebate Price

B: Lacking the Word "Rebate" or "Mail-In"

Federal Regulations and State Laws on Rebate Advertisements

Federal Regulations

The FTC's complaints and consent decrees about rebate advertisements have addressed two specific concerns: (1) ads that show the lower after-rebate price without the savings and (2) ads that fail to show the higher before-rebate or selling price when this price cannot be readily discerned because two or more promotions are involved. These issues have been addressed in two different consent decrees (*Buy.Com Inc., In the Matter of* 2000; *Value America, In the Matter of* 2000). For example, in the case of Buy.com, the FTC issued a complaint because the retailer advertised the after-rebate price of $269 and failed to disclose conspicuously that the rebate savings amounts were $200 and $400 and that the before-rebate price was $869.

In both consent decrees, the firms were required to show the savings amount along with the after-rebate price. Specifically, the FTC prohibited these firms from making any representation "about the after-rebate cost of [the] product or service, unless it discloses, clearly and conspicuously, and in close proximity to the representation, the amounts of any and all rebates offered." In addition, the FTC required that the ad state the "total price or cost to consumers of the product or service, excluding any and all rebate amounts" unless "the offer involves only one rebate and no other reductions in the total price."

State Laws

Six U.S. states have passed laws banning rebate ads that (1) state the lower after-rebate price, (2) fail to state the higher before-rebate price, and/or (3) fail to state the mail-in rebate requirement. The most restrictive laws are in Connecticut (1988) and Rhode Island (2007); these states do not permit advertising of the lower after-rebate price "unless the amount of the [manufacturer's] rebate is provided to the consumer by the retailer at the time of purchase of the advertised item." In other words, in these states, the ads cannot state the lower after-rebate price unless the rebate is provided instantly, making it a temporary price reduction instead. Rebate ads can only list the before-rebate price and the savings to promote the offer.

California (1991) requires ads to show the higher before-rebate price, so this must be shown along with the savings and/or the after-rebate price to promote the offer. By contrast, ads in Connecticut (1988) and Rhode Island (2007) cannot state the after-rebate price. New York (1994) and Oklahoma (2004) require ads to state the before-rebate price and the mail-in requirement. Maryland (2008) only requires ads to state the mail-in requirement.

Academic Research Related to Rebate Advertisements

Academic research on the prevalence of different rebate ads shows that the majority emphasize the after-rebate price. A content analysis of 141 randomly selected rebate ads (Kim 2006) indicates that 62% emphasized the lower and more desirable after-rebate price by making it visually salient. Only 19% of the ads presented the higher before-rebate price and/or the savings in an equally visible and salient manner. Furthermore, an experiment (Kim 2006) shows that ads emphasizing the after-rebate price (vs. those that do not) elicited more negative affect due to perceived deception and reduced purchase likelihood if the savings were large.

Other academic studies show that ads that convey comparative prices significantly influence consumer choice. In general, ads that convey comparative prices (vs. those that do not) enhance the salience of price as a decision criterion and increase preference for the product with lowest price (Compeau and Grewal 1998; Pechmann 1996). Similarly, rebate ads that feature the lower after-rebate price (vs. those that do not) are more effective at promoting the rebated product. Moorthy and Soman (2003) compare two ads, one stating, "Regular Price $65. Mail-in Rebate $15. Effective

Price $50" and the other stating, "Regular Price $65. Mail-in Rebate $15." The percentage of consumers who indicated intent to purchase the rebated product was 68% when the ad stated the after-rebate price versus 44% when it did not, even though consumers could readily calculate the after-rebate price (as the regular price of $65 minus the mail-in rebate of $15).

Other research has examined how consumers respond when shown (vs. not shown) a high reference price, meaning the regular price before it is marked down for a sale; a competitor's price; or a manufacturer's suggested retail price (Urbany, Bearden, and Weilbaker 1988). The findings indicate that a high reference price enhances a product's perceived value and especially its transaction value. Transaction value is the value of the deal and is based on a comparison of a reference price with the final selling price (Grewal, Monroe, and Krishnan 1998). Acquisition value, in contrast, is the product's inherent value and is based on a trade-off between the product's benefits and costs (Monroe 1990). A high reference price enhances perceived transaction value and purchase willingness (Bearden, Lichtenstein, and Teel 1984; Della Bitta, Monroe, and McGinnis 1981; Friedman, Weingarten, and Friedman 1982; Inman, McAlister, and Hoyer 1990; Keiser and Krum 1976; Urbany, Bearden, and Weilbaker 1988); it also raises estimates of the product's regular price (Urbany, Bearden, and Weilbaker 1988) and reduces price search (Grewal and Compeau 1992). This suggests that a high before-rebate price could serve as a reference price and yield similar effects. However, in reference price studies, consumers did not actually pay the high reference price; they paid the lower sale or promoted price. Thus, it is not entirely clear whether consumers will respond as favorably to a high rebate reference price, because they will actually have to pay that high price at purchase.

Other research conducted by rebate practitioners indicates that consumers are influenced by the rebate savings amount. A national rebate administrator provided us with field study data from a national drugstore retailer's rebate offers. The data indicate that a high savings amount enhances both rebate purchase rates and redemption rates. The average increase in sales (relative to expected) was 32% for $1 rebates, 89% for $10 rebates, and 135% for $20 rebates; and the average redemption rate was 7% for $1 rebates, 27% for $10 rebates, and 50% for $20 rebates. Consumers' sensitivity to rebate savings amounts likely becomes even more pronounced when the savings represent a high percentage of the product price, consistent with Weber's law and Thaler's transaction utility theory (Grewal and Marmorstein 1994). Research based on these theories suggests that a higher savings-to-price ratio also enhances a product's utility.

Finally, basic psychological research on visual identification is relevant to the issue of whether consumers accurately identify rebate ads that do not conspicuously state the word "rebate" or "mail-in." Nosofsky (1986) examines people's recognition of unfamiliar visual stimuli and finds that people have difficulty recognizing and classifying stimuli that do not resemble familiar exemplars, particularly if the stimuli resemble discrepant exemplars. This basic research suggests that consumers may have difficulty accurately identifying rebate ads if they lack standard visual characteristics (e.g., the word "rebate" or "mail-in")—especially if they visually resemble ads for instant price reductions or sales. However, no research has been conducted on visual misidentification of rebate ads, so it is not entirely clear to what extent these findings generalize. Table 2 summarizes the main research findings.

Policies Versus Research on Rebate Advertisements

In this section, we assess the federal and state rebate ad policies using the academic research. To summarize the policies, Connecticut (1988) and Rhode Island (2007) ban ads that show the lower after-rebate price, though the FTC permits such ads as long as the savings amount is shown. Research indicates that the majority of rebate ads emphasize the lower after-rebate price (Kim 2006). Furthermore, research indicates that consumers react more favorably to ads that show the after-rebate price, regardless of whether the savings amount is also shown (Moorthy and Soman 2003). Thus, if policy makers want to discourage consumers from focusing on an after-rebate price that is contingent on redemption, they may want to ban ads showing that price and only allow ads showing the before-rebate price and savings, as in Connecticut and Rhode Island.

California (1991), New York (1994), and Oklahoma (2004) require ads to state the high before-rebate price along with the after-rebate price (and/or savings), and the FTC requires this given two or more promotions. Research indicates that a high reference price that will not be paid (e.g., a presale price) enhances perceived transaction value and purchase willingness (Bearden, Lichtenstein, and Teel 1984; Della Bitta, Monroe, and McGinnis 1981; Friedman, Weingarten, and Friedman 1982; Inman, McAlister, and Hoyer 1990; Keiser and Krum 1976; Urbany, Bearden, and Weilbaker 1988), raises estimates of the product's regular price (Urbany, Bearden, and Weilbaker 1988), and reduces price search (Grewal and Compeau 1992). This indirectly suggests that consumers could be influenced by a high before-rebate reference price to purchase the rebated product, which is not the intent of the laws, though it is unclear whether the results generalize to this scenario. Rebate ads in Connecticut and Rhode Island do not show a reference price because only one price can be shown: the before-rebate price and the savings.

Maryland (2008), New York (1994), and Oklahoma (2004) require rebate ads to state the mail-in requirement. Extrapolating from basic research on visual identification (Nosofsky 1986), if a rebate ad fails to include the word "rebate" or "mail-in" and instead only states the lower after-rebate price and/or the savings, consumers could misconstrue the ad as being for a temporary price reduction because that is what it visually resembles. Thus, requiring ads to state the mail-in requirement should reduce consumer confusion, but the evidence is indirect.

Research Gaps Related to Rebate Advertisements

There are several gaps in rebate advertising research. Virtually no research has directly examined miscomprehension

Table 2. Research Findings Relevant to Rebates

Research relevant to rebate price advertisements	• The majority of rebate ads emphasize the lower after-rebate price by making it visually salient (Kim 2006). • Ads that convey comparative prices (vs. those that do not) enhance the salience of price as a decision criterion and increase preference for the product with lowest price (Compeau and Grewal 1998; Pechmann 1996). • Consumers are more likely to purchase rebated products when the rebate ads show (vs. do not show) the lower after-rebate price (Moorthy and Soman 2003). • The presence (vs. absence) of a high reference price tends to enhance perceived transaction value and purchase willingness (Bearden, Lichtenstein, and Teel1984; Della Bitta, Monroe, and McGinnis 1981; Friedman, Weingarten, and Friedman 1982; Inman, McAlister, and Hoyer 1990; Keiser and Krum 1976; Urbany, Bearden, and Weilbaker 1988), raise estimates of the product's regular price (Urbany, Bearden, and Weilbaker 1988), and reduce price search (Grewal and Compeau 1992). • When consumers see a higher rebate savings amount, they are more likely to purchase the rebated product and to redeem the rebate (data from a national rebate administrator). • Consumers consider the savings amount relative to the product price and derive psychological utility from a high savings-to-price ratio (Grewal and Marmorstein 1994). • In line with research on visual identification (Nosofsky 1986), consumers may have difficulty identifying rebate price ads if the ads lack the visual characteristics of familiar exemplars (e.g., rebate or mail-in) and/or visually resemble temporary price reductions (e.g., save).
Research relevant to rebate redemption disclosures	• Consumers tend to overweigh future financial rewards relative to future effort; thus, rewards appear more attractive initially than later when effort is required to obtain the rewards (Soman 1998). • Consumers tend to underestimate the time and effort required to complete future tasks and to overestimate the likelihood of task completion (Buehler and Griffin 2003; Gilovich, Kerr, and Medvec 1993; Liberman and Trope 1998; Soman 1998; Trope and Liberman 2000; Zauberman and Lynch 2005). • Requiring consumers to read the rebate redemption form with the redemption requirements at purchase may decrease purchases of the rebated product and, among purchasers, increase redemption and satisfaction with the redemption process (Silk 2004). • In line with research on prospective forgetting, providing rebate redemption forms at purchase may provide a memory cue for later redemption (Krishnan and Shapiro 1999; Marsh, Hicks, and Watson 2002; Shapiro and Krishnan 1999). • Consumers tend not to be affected by information disclosures because they lack the motivation, ability, and/or opportunity to read the disclosures (Stewart and Martin 2004).
Research relevant to rebate redemption processes	• Consumers who are given longer deadlines to complete tasks are more likely to procrastinate and/or forget and are less likely to complete tasks (Ariely and Wertenbroch 2002; Silk 2004; Tversky and Shafir 1992), though they tend to think the opposite (Shu and Gneezy 2010). • Consumers who face a more effortful rebate redemption task may be less likely to redeem (Soman 1998) unless perhaps they perceive the task as unfair (Silk 2004). • Consumers who make external attributions about rebate noncompliance notifications or suspect that firms have ulterior motives may exhibit dissatisfaction, complaining, avoidance, and/or suspicion (Campbell and Kirmani 2000; Silk 2004; Weiner 1985, 2000).
Research relevant to rebate payment processes	• Consumers apply discount rates to future rebate payments and understand that money is worth more if paid now than later (Frederick, Loewenstein, and O'Donoghue 2002; Pyone and Isen 2011; Thaler 1981). • Consumers tend to react unfavorably if they have to wait longer than 30 days for a rebate payment (Kim 2006; Soman 1998). • In line with research on visual identification (Nosofsky 1986), consumers may have difficulty identifying rebate payments if they lack the visual characteristics of familiar exemplars (e.g., check envelopes) and/or visually resemble discrepant exemplars (e.g., junk mail).

of rebate ads. However, basic research shows that miscomprehension often occurs because stimuli that facilitate comprehension are not visually prominent, whereas stimuli that facilitate miscomprehension are prominent (Haber and Hershenson 1973; Nosofsky 1986). It would be useful to examine the implications of this by testing different rebate ads.

A specific research proposition is that the more visually prominent the before-rebate price and/or mail-in requirement in relation to the after-rebate price and/or savings, the greater the comprehension of the before-rebate price and of the offer being a rebate. Researchers might test this proposition by running experiments beginning with the five types of rebate ads mandated by regulation, which result in the ad stating the following: (1) the before-rebate price and savings only (no after-rebate price), as in Connecticut and Rhode Island; (2) the before-rebate price (with the after-rebate price and/or savings), as in California; (3) the information in (2) and the mail-in requirement, as in New York and Oklahoma; (4) the mail-in requirement only, as in Maryland; and (5) the after-rebate price with the savings and the before-rebate price if there are two or more price promotions, as the FTC mandates. Each stimulus factor should be varied independently of the others. We posit that comprehension should be higher for ad type 1 and possibly ad type 3.

Another gap is that reference price studies have not yet examined the effects of a high before-rebate reference price that consumers must pay; prior work has examined reference prices that consumers did not have to pay. Thus, researchers might want to compare ads with the before-rebate reference price, after-rebate price, and savings versus ads with just the after-rebate price and savings (cf. Moorthy and Soman 2003). Listing the before-rebate reference price should increase transaction value and purchase willingness (Bearden, Lichtenstein, and Teel 1984; Della Bitta, Monroe, and McGinnis 1981; Friedman, Weingarten, and Friedman 1982; Inman, McAlister, and Hoyer 1990; Keiser and Krum 1976; Urbany, Bearden, and Weilbaker 1988), enhance regular price estimates (Urbany, Bearden, and Weilbaker 1988), lower price search (Grewal and Compeau 1992), and increase price comprehension (Haber and Hershenson 1973; Nosofsky 1986). However, moderators that make salient payment cost could weaken the effects on purchase (e.g., cost magnitude, payment method). If listing the before-rebate reference price with the after-rebate price encourages rebate purchases without facilitating price comprehension, California, New York, Oklahoma, and the FTC might do well to reconsider their policies that encourage firms to list both prices. Table 3 shows the rebate research propositions.

Rebate Redemption Disclosures

Concerns About Rebate Redemption Disclosures

Another major concern about rebates that is reflected in federal regulations and state laws is that the redemption disclosures may not always be clear and conspicuous with respect to the screening criteria, terms, and/or conditions. When consumers learn the terms of the rebate or what they must do to redeem, they may feel baited or that it was a "ripoff that wasn't worth the time and aggravation" (FTC 2007b, p. 62). As Figure 1 shows, rebate ads often do not disclose redemption criteria, terms, or conditions. Redemption forms may provide this type of information but are typically distributed after the purchase decision, such as in the product packaging or on the Internet (Kim 2006). When rebate redemption criteria, terms, or conditions are onerous or restrictive, nondisclosure may be especially problematic.

Federal Regulations and State Laws on Rebate Redemption Disclosures

Federal Regulations

The FTC's complaints and consent decrees regarding rebate redemption disclosures have focused on two key issues: (1) disclosing the redemption criteria in ads if the criteria are unusual and restrictive and (2) providing the redemption form in a timely fashion. Disclosure of unusual and restrictive criteria in ads has been mandated in five consent decrees. In *FTC v. Inphonic* (2007), consumers saw rebate ads without the redemption criteria or "anything about their nature or significance" and were unaware of "unusual and restrictive terms and conditions" such as that "they would not be able to submit a request for the rebate until as much as six months after purchase." The firm was required to conspicuously disclose in rebate ads all unusual and restrictive terms and conditions, including wait period and required records.

Redemption form provision has been mandated in three consent decrees, specifying provision by the time of shipment and/or for offer duration. In *FTC v. Capell* (2001), the firm advertised that rebates were available but took eight to ten weeks to provide the redemption forms, by which time many rebates had expired. The firm was required to provide the forms "at or before the time of shipment." In *USA v. Iomega* (1998), the redemption forms were not consistently available at retail outlets, and there was inadequate staff to handle requests for forms. The firm was required to provide redemption forms for "the duration of the offer."

Table 3. Recommendations for Rebate Research Propositions to be Tested

Rebate advertisements	P_1: The more visually prominent the before-rebate price and/or mail-in requirement relative to the after-rebate price and/or savings, the greater the comprehension of the before-rebate price and of the offer being a rebate.
	P_2: Ads showing the before-rebate reference price, after-rebate price, and savings (vs. just the after-rebate price and savings) should increase transaction value and purchase willingness, enhance regular price estimates, lower price search, and increase price comprehension. However, moderators that make salient the purchase cost may weaken the purchase effects.
Rebate redemption disclosures	P_3: Consumers who are (vs. are not) provided with a short, color-coded and tabular form for rebate redemption disclosures at point of purchase are less likely to purchase the rebated product, and if they do purchase, they are more likely to redeem.
Rebate redemption processes	P_4: The shorter the deadline for submitting the rebate redemption form (e.g., one week vs. two weeks, one month, or two months), the higher the redemption rate, unless the deadline is extremely short (e.g., one day) or the deadline is not clearly highlighted on the form.
Rebate payment processes	P_5: The more a rebate payment mailer visually resembles junk mail (e.g., small mailer size, poor paper quality, return address nonspecificity), the lower the deposit rate; however, prominently labeling the mailer as a rebate check from a firm will improve the deposit rate.

Finally, in *FTC v. InPhonic* (2007) regarding an Internet rebate offer, the FTC was concerned about the hyperlink to the redemption criteria. The complaint alleged the following: "There is nothing on the link itself to indicate the nature or significance of the [unusual and restrictive] terms and conditions." As the FTC later explained, "Here the hyperlink basically said, 'Rebate Offer.'" (FTC 2007b, p. 16). The FTC opined that the hyperlink did not comply with its standard for adequate disclosure on the Internet, described in disclosure guidelines (FTC 2000), which state, "You [must] label the link to convey the importance, nature, and relevance of the information it leads to" (FTC 2007b, p. 15).

State Laws

States are concerned about rebate redemption disclosures and redemption form provision as well. North Carolina (2007) requires that the following basic redemption information be conspicuously printed on the redemption form: "(1) the terms of the rebate; (2) requirements for a valid claim, including any additional information to be submitted with the rebate form; (3) the expiration date of the rebate offer, if applicable"; and (4) "the telephone number or e-mail address of the person, firm, or corporation that is offering the rebate." New York (2010) requires that both firms and retailers disclose noncash rebate payments and fees.

Maine (2006) and New York (2005, 2006) have laws about redemption form provision. Maine (2006) is the most stringent, because it requires that redemption forms be available both "at the time of advertising and promotion" and "at the time of sale ... located with the merchandise" and that expired forms be removed. New York (2005) requires that redemption forms be provided "directly with the product" or, alternatively, that the retailer must be given a sufficient quantity of forms or a means to create the forms. In addition, in New York (2006), for Internet or phone sales, the redemption form must be displayed as "a printable document on the Internet page on which the product is purchased or on an Internet page accessible by a hyperlink from [this] page"; for phone sales, the form must be sent to the customer if requested.

Academic Research Related to Rebate Redemption Disclosures

Considerable academic research suggests that consumers are prone to inaccuracies in estimating the time and effort involved in rebate redemption and their own redemption likelihood (Lynch and Zauberman 2006; Soman 1998; Zauberman and Lynch 2005). Most studies do not directly investigate rebates, but they assess similar situations such as delayed financial rewards. Soman's (1998) study concludes that future financial rewards are overweighed relative to future effort, making the rewards appear more attractive initially than later on, when effort is required to obtain the rewards. Specifically, people were more likely to choose a large delayed payment involving effort over a smaller instant payment involving no effort; however, later, many people failed to exert the effort and received no payment.

Numerous other studies show that people tend to be overly optimistic about their likelihood of completing future tasks. Studies on resource slack show that people tend to overestimate the amount of time they will have in future because they do not recognize that other activities will compete for their time; thus, they overcommit to future tasks (Zauberman and Lynch 2005). Studies on the planning fallacy indicate that people make overly optimistic predictions about finishing future tasks (Buehler and Griffin 2003). Furthermore, when people predict future performance, they generate more reasons for success than failure; in contrast, when predicting performance on the day of the performance, they do the opposite (Gilovich, Kerr, and Medvec 1993). Temporal construal theory may help provide a unifying explanation for these effects (Liberman and Trope 1998; Trope and Liberman 2000). Studies on this theory show that when people think about the future, they tend to construe situations abstractly and overlook constraints; in contrast, when people think about the present, their construal is more concrete, and they recognize constraints.

Consumers' tendency to underestimate future task effort and not think in detail about task requirements suggests it may be important to disclose rebate redemption requirements before decision making. Researchers have studied other information disclosures extensively (Hoy and Andrews 2004; Stewart and Martin 2004; Wilkie 1982, 1983, 1985, 1986, 1987). The findings indicate that consumers typically do not read information disclosures (Wilkie 1982), because they lack the motivation, ability, and/or opportunity due to competing goals, lack of knowledge, time constraints, and/or other factors (Stewart and Martin 1994, 2004). This finding suggests that giving consumers the rebate redemption requirements before purchase may have a limited impact on improving their decision making.

However, one study required (vs. did not require) consumers to read rebate redemption requirements before purchase, and the results were promising (Silk 2004). Consumers who were required to read the requirements were less likely to purchase the rebated product; in addition, if they did purchase, they were more likely to redeem and to be satisfied with the redemption process. Purchase rates decreased because prospective buyers more accurately calibrated their (low) likelihood of redeeming. Those who bought were more likely to redeem and felt more satisfied because they knew what to expect. This study suggests that it may be important to provide rebate redemption forms at purchase so consumers at least have the opportunity to read the forms, even if many will forgo this opportunity (Stewart and Martin 1994, 2004).

Some research suggests that simply providing consumers with a rebate redemption form at purchase may also increase redemptions, because the form may provide a useful memory cue. Numerous studies on prospective forgetting indicate that people tend to rely on physical cues in the environment to remind them to perform future tasks and that such cues can be highly effective (Krishnan and Shapiro 1999; Marsh, Hicks, and Watson 2002; Shapiro and Krishnan 1999). Thus, if redemption forms are given at purchase, they might serve as a useful memory cue, thereby increasing redemptions.

Policies Versus Research on Rebate Redemption Disclosures

Overall, the main policy goals regarding rebate redemption are to ensure that consumers know what the redemption criteria are, particularly if they are unusual and restrictive, and to ensure that consumers are provided with redemption forms in a timely way. However, methods to achieve these goals vary widely. The FTC requires rebate ads to disclose unusual and restrictive redemption criteria and requires redemption form provision by shipment and/or for offer duration. North Carolina (2007) requires rebate forms to disclose all redemption criteria, whereas New York (2010) requires firms and retailers to disclose noncash rebate payments only. Moreover, New York (2005, 2006) requires rebate redemption forms with the product or at point of sale, whereas Maine (2005) requires forms in the ads and at point of sale.

According to extensive research on related topics, it seems that consumers are likely to underestimate the time and effort involved in rebate redemption and to overestimate their redemption likelihood (Lynch and Zauberman 2006; Soman 1998; Zauberman and Lynch 2005). Furthermore, one study (Silk 2004) indicates that it may be useful to provide redemption forms at purchase because if consumers read the redemption criteria, they are more likely to calibrate their redemption likelihood accurately. Fewer will buy, and those who do buy, will be more apt to redeem. The problem is that consumers may not read the redemption criteria due to low motivation, ability, and/or opportunity (Stewart and Martin 2004). To address this problem, the redemption form may provide a cue that reminds consumers to redeem, increasing redemptions that way (Krishnan and Shapiro 1999; Marsh, Hicks, and Watson 2002; Shapiro and Krishnan 1999).

Research Gaps Related to Rebate Redemption Disclosures

The main unanswered questions regarding rebate redemption disclosures are whether significant numbers of consumers will actually read rebate redemption requirements if they receive them before the purchase decision and what factors may affect this. Research shows that consumers make better decisions if required to read the rebate redemption requirements (Silk 2004), but it also shows that consumers tend not to read such disclosures due to lack of motivation, opportunity, and/or ability (Stewart and Martin 1994, 2004).

According to the research indicating the low attention to and impact of disclosures (Stewart and Martin 1994, 2004), it seems important that any approach to providing rebate redemption requirements should focus on maximizing attention to the information. One approach could be to develop a short, color-coded, tabular form for rebate redemption disclosures that contains just the most important facts (e.g., requirements: serial number from box and one-page form; deadline: 30 days; payment: within 30 days) and that flags anything unusual in red. A controlled experiment could compare this new form with the standard form, and the measured outcome could be rebate purchases and redemptions. The research proposition is as follows: Consumers who are (vs. are not) provided with a short, color-coded, and tabular form for rebate redemption disclosures at point of purchase are less likely to purchase the rebated product, and if they do purchase, they are more likely to redeem. If this form is effective, it could conceivably become an industry standard.

Rebate Redemption Processes

Concerns About Rebate Redemption Processes

There are also significant concerns about rebate redemption processes—in particular, that consumers might procrastinate and fail to submit the redemption form by the deadline. Many policy makers believe "offer expiration dates [are] too short" (FTC 2007b, p. 78), and therefore, there is substantial legislation about this. Another concern is that consumers may not be notified of noncompliance in sufficient time to allow them to fix problems. Furthermore, redemption may seem time-consuming, effortful, onerous, and/or restrictive, such as the requirement that the original sales receipt be submitted. Firms' reasons for rejecting redemption forms as noncompliant may also seem unfair or unclear. Overall, there is a concern that some firms may try to impose redemption requirements that thwart redemptions to reduce their payouts. As one consumer advocate opined, "There are a lot of companies spending a lot of time and money trying to maximize how many of those mistakes consumers can make, and increase breakage, or rebate denials" (FTC 2007b, p. 63).

Completion of a rebate redemption form can often be effortful, requiring consumers to fill in buyer name, address, telephone number, and signature; the dealer name and purchase date; and/or the product serial number. The form may also require consumers to attach the original sales receipt or a copy, and/or part of the package with the serial number, primarily to deter fraud. But finding the serial number on a package may be difficult. A consumer advocate described a case in which "it turned out the [serial] number ... was a number you couldn't actually see with the naked eye" (FTC 2007b, p. 65). Unclear noncompliance notifications may further discourage consumers; for example, in Figure 2, Panel A, the notification was indecipherable: "Your ESN/MEID has already been associated with a previous rebate."

Federal Regulations and State Laws on Rebate Redemption Processes

Federal Regulations

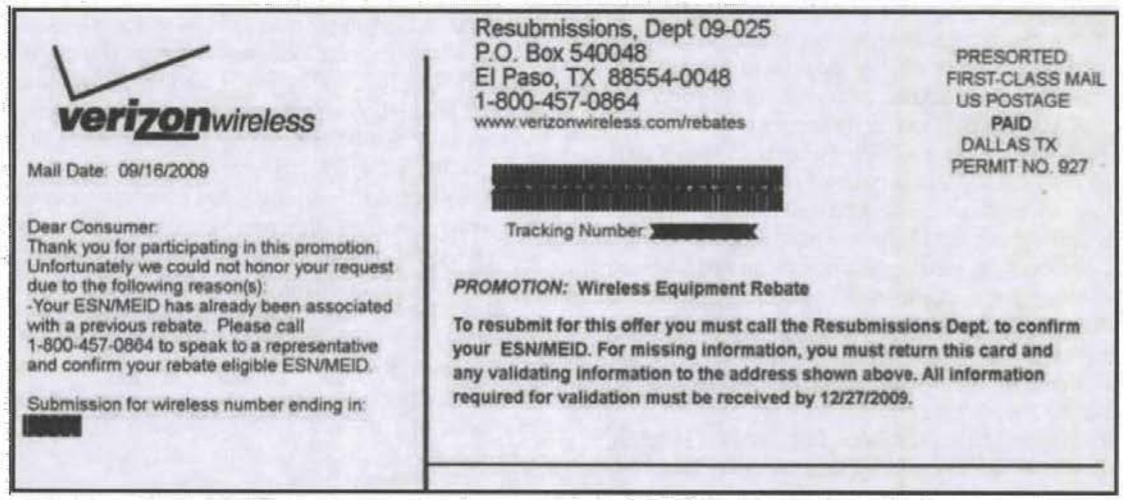
The FTC has not addressed rebate redemption processes in its complaints or consent decrees. Apparently, it has not found company behavior related to redemption processes to be violative of the FTC Act or the Mail Order Rule.

State Laws

States have primarily been concerned about two issues related to rebate redemption processes: (1) that firms provide adequate time for consumers to submit redemption forms and resubmit noncompliant forms and (2) that firms do not penalize specific consumer groups (e.g., those with post-office boxes) when trying to deter fraud. Although many states are concerned about giving consumers adequate time to redeem, they disagree on the details. In New York (2005) and Washington (2009), consumers must be given at least 14 days to redeem. In North Carolina (2007), they must be given at least 30 days but no more than six months. In Texas (2007), they must be given 30 days to resubmit a noncompliant form, and they must be informed

Figure 2. Examples of Deceptive Mailings

A: Rebate Noncompliance Notification



B: Postcard Payment Mailer

of noncompliance by the time payment was promised or, if not specified, within 30 days.

Other states' regulations are attempts to ensure that firms, when combating fraud, do not inadvertently penalize certain groups in their redemption processes. Rhode Island (2007b) is concerned about members of a family or multi-family unit who purchase the same rebated product. It does not permit firms that issue rebates to "restrict their use to one per household per item purchased ... [except] on the sale of beverages." North Dakota (2005) does not allow firms to penalize redeemers who, because they live in rural areas and do not get home mail delivery, use post-office boxes. Its law states that "a person who is eligible to receive a mail-in rebate ... must be given the option of providing either a street address or a post-office box number as a mailing address."

Academic Research Related to Rebate Redemption Processes

Academic studies on deadlines consistently demonstrate that people actually respond better to short deadlines because this discourages procrastination and reduces forgetting (Ariely and Wertenbroch 2002; Shu and Gneezy 2010; Silk 2004; Tversky and Shafir 1992). For example, task completion rates tend to be higher for shorter deadlines relative to longer ones. Tversky and Shafir (1992) paid students to complete a questionnaire by a deadline of five days, three weeks, or no deadline; they observed completion rates of 60%, 42%, and 25%, respectively. Ariely and Wertenbroch (2002) find that students who set longer deadlines were less likely to complete assignments. Silk (2004) observes lower rebate redemption rates as deadlines were lengthened from 1 day (77%) to 21 days (59%).

Shu and Gneezy (2010) find that people expected to do better with long deadlines but, in reality, did better with short deadlines. Students were offered a $6 gift certificate with either a three-week or a two-month expiration. Whereas students with the longer expiration had higher expectations of redeeming it (68% vs. 50%), students with the shorter expiration actually redeemed it at a greater rate (31% vs. 6%). A follow-up study showed that a longer deadline was especially problematic when the cost to redeem was high. Students were given a free movie ticket with either a two- or six-week redemption. The expiration date did not matter when the theater was close (low cost to redeem), but a longer expiration deterred redemptions when the theater was far.

Other research has examined how rebate redemption effort affects redemption rates, and it indicates this relationship may be curvilinear. Soman (1998) asks consumers to complete a form that was either four or eight pages long in exchange for money, so the task was quite similar to rebate redemption. The longer form decreased the completion rate significantly, from 43% to 24%. In contrast, Silk (2004) explicitly manipulates the effort required to redeem a rebate without disclosing the effort at purchase and observed effects opposite to Soman (1998). Increasing the effort increased the redemption rate marginally from 63% (average effort) to 74% (far-above-average effort). Consumers reported that the effortful form was unfair and unreasonable, causing them to try harder. This work suggests that a more effortful redemption task will likely lower the redemption rate, except perhaps if the task is perceived as unfair.

Moreover, few researchers have assessed consumer response to rebate noncompliance notifications to determine the common attributions made. However, researchers have studied how consumers react to similarly unfavorable events, often using attribution theory (Heider 1958; Weiner 1985). The general finding is that when consumers experience an unfavorable event, they try to attribute it to a specific cause. They may make internal attributions and ascribe causality to the self, or they may make external attributions and ascribe causality to the firm, which is more likely if they perceive the firm as being in control and exhibiting a pattern. When a firm sends out noncompliance notifications, some consumers may perceive this as being under the firm's control and standard practice, evoking negative external attributions. Negative external attributions often result in dissatisfaction, complaining, and/or avoidance (Weiner 2000).

Silk (2004) directly examines consumers' attributions about rebate redemption failures and assessed outcomes. Consumers who failed to redeem a rebate successfully and made external attributions (e.g., "the criteria were unclear") rather than internal attributions (e.g., "I did not read the criteria") reported less interest in purchasing another rebated product. This finding suggests that firms should encourage internal attributions about redemption failures (e.g., by clearly explaining to consumers what they did wrong and assisting them in correcting their mistakes).

Finally, studies indicate that consumers often have considerable persuasion knowledge, meaning knowledge about marketers' persuasive motives and tactics (Campbell and Kirmani 2000). Studies also show that persuasion knowledge become salient when consumers detect that a firm may have ulterior motives, evoking suspicion. This could happen if consumers who receive rebate noncompliance notifications suspect that firms may have ulterior motives.

Policies Versus Research on Rebate Redemption Processes

To summarize current policy on rebate redemption processes, there is no explicit federal policy because no FTC consent decree has addressed rebate redemption processes. However, several state laws address them. Certain states require that consumers be given at least 14 days to redeem rebates (New York 2005, Washington 2009) or at least 30 days (North Carolina 2007), but no more than six months (North Carolina 2007). Texas (2007) requires 30 days for resubmission. However, research indicates that consumers are actually more likely to redeem rebates with shorter deadlines (e.g., one to two weeks), because this diminishes procrastination and forgetting (Ariely and Wertenbroch 2002; Shu and Gneezy 2010; Silk 2004; Tversky and Shafir 1992). In contrast, the conventional wisdom is that longer deadlines facilitate redemptions (Shu and Gneezy 2010), which may be why certain states mandate at least 14 or 30 days to redeem.

If the goal is to help more consumers redeem rebates, mandating that they be given at least 30 days is unlikely to be effective because it is based on an invalid assumption: that too little time is the problem. Mandating that consumers be given no more than six months (North Carolina 2007) recognizes that too much time is the problem, but it does not go far enough. The research indicates that redemption rates would be higher if consumers were given no more than one to two weeks. However, consumers must be made aware of the submission deadline at purchase to ensure they do not procrastinate, only later to discover that the deadline has passed. Thus, the disclosure of deadlines at point of sale seems necessary for this to be effective. In addition, consumers would probably need to be informed of the rationale for providing such a short deadline.

Regarding redemption process requirements, one state requires firms to accept multiple valid redemption forms from the same household (Rhode Island 2007b), while another state requires firms to accept post-office boxes as addresses (North Dakota 2005). There is no research on how consumers respond to rebate noncompliance notifications. However, research on how consumers respond to other negative events indicates that they may tend to make external attributions and blame the firm (Weiner 2000), resulting in dissatisfaction, complaining, avoidance (Silk 2004), and suspicion (Campbell and Kirmani 2000). This research suggests that firms should avoid redemption process requirements that consumers may perceive as unfair.

Research Gaps Related to Rebate Redemption Processes

Perhaps the main research gap related to rebate redemption processes is that the research indicating short (one- to two-week) deadlines are better than long ones is based almost entirely on student samples and tasks unrelated to rebates (Ariely and Wertenbroch 2002; Gneezy and Rustichini 2000; Shu and Gneezy 2010; Tversky and Shafir 1992). Thus, it is perhaps understandable that some policy makers do not seem to have considered this research and have required firms to provide longer deadlines so that consumers have more time to submit rebate redemption forms (e.g., North Carolina 2007). Therefore, it seems important to study rebate deadlines in controlled field studies in which the same rebate is offered with several different deadlines, consumers receive one of the deadlines at random, and actual redemption rates are compared. The research proposition is as follows: the shorter the deadline for submitting the rebate redemption form (e.g., one week vs. two weeks, one month, or two months), the higher the redemption rate unless the deadline is extremely short (e.g., one day) or the deadline is not clearly highlighted on the form.

Rebate Payment Processes

Concerns About Rebate Payment Processes

Last, there are substantial concerns about rebate payment processes. Some consumers have experienced excessive delays in receiving deserved payments or have never been paid. Payment problems have been a main focus of federal consent decrees. In the Soyo case (*Soyo, in the Matter of* 2007), for example, "Ninety-five percent of consumers who received rebates in this promotion received them outside of and beyond the twelve-week outer limit that was promised. The average was twenty-four weeks, and some waited for a year" (FTC 2007b, p. 17). When there are delays, consumers may have difficulty finding out if or when they will be paid. Yet another concern involves nonstandard payment mailers that "look a lot like junk mail" (FTC 2007b, p. 62). Figure 2, Panel B, shows a payment postcard. Because of its nonstandard format and small size, some consumers may have discarded it as junk mail, though the firm may have used it to save printing or mailing costs or to deter theft.

Federal Regulations and State Laws on Rebate Payment Processes

Federal Policies

Numerous FTC complaints and consent decrees have addressed rebate nonpayment and/or delays. Numerous firms have failed to pay rebates in a timely manner, or not at all, typically because the redemption rate was unexpectedly high and/or there were fulfillment problems. The FTC's policy derives directly from its Mail Order Rule, which requires that mail-order products be shipped when specified or within 30 days, and this policy has been applied in 15 rebate consent decrees. Firms must provide a rebate payment "within the time specified for, if no time is specified, within thirty (30) days" and should not misrepresent the "time in which any rebate will be mailed," or "the status or reasons for any delay."

In *American Telecom Services, Inc., In the Matter of* (2009), the firm promised $5 to $50 rebates within eight weeks, but "tens of thousands of consumers who submitted properly completed requests for rebates ... experienced substantial delays, including delays of one year or longer ... due, in part, to ATS's inability to pay its third party fulfillment houses, as well as its refusal to timely pay [due to] disagreements." In *FTC v. Granik* (2004), a web retailer offered rebates of up to 100% on electronics priced $1,000 or more; redemption rate was much higher than expected, and the firm could not pay and even went bankrupt. Even large firms sometimes fail to pay rebates when promised. In *Philips Corporation, In the Matter of* (2002), Philips Electronics promised $20 to $100 rebates within eight weeks but "over fifty thousand consumers experienced delays of up to six months or more."

State Policies

Some states require that rebates be paid by the time specified or within 30 days (Texas 2007), whereas others specify 60 days (North Carolina 2007; New York 2005) or even 90 days (Washington 2009). If the rebate requires purchase of a service for a certain time period, Texas (2007) mandates 30-day payment after rebate form submission or both form submission and expiration of the required service period, whichever is later. The state of Washington (2009) requires firms to identify payment mailers: "If a rebate is sent to a consumer as a check, the check must be mailed in a manner that identifies the piece of mail as the expected rebate check."

Academic Research Related to Rebate Payment Processes

Research on the discounting of delayed payments indicates that most consumers understand that in principle, if they must wait to be paid, they should receive a larger payment (Frederick, Loewenstein, and O'Donoghue 2002; Pyone and Isen 2011; Thaler 1981). Thaler (1981) assesses how much money consumers would want to receive if they had to wait for a $15 payment, either for one month or one year. The median responses were $20 and $50, which implies average annual discount rates of 345% and 120%, respectively (Frederick, Loewenstein, and O'Donoghue 2002).

Applying the same discount rates to a $100 rebate indicates that it would only be worth $75.01 if paid in one month ($\$100 \times e^{-(3.45)(1/12)} = \$75.01$) or $30.12 if paid in one year ($\$100 \times e^{-(1.20)(1)} = \$30.12$).

Pyone and Isen (2011) examine preference for an instant payment relative to an increasingly higher value mail-in rebate to be paid in four to six weeks. The results indicate that delayed mail-in rebates were discounted, even when consumers were not explicitly asked about the rebate's future monetary value. Consumers preferred a $25 instant payment relative to a $30 mail-in rebate (87% vs. 13%) or even a $35 mail-in rebate (65% vs. 35%). However, when the mail-in rebate reached $40, they preferred it over the $25 instant payment (60% vs. 40%), and they preferred the mail-in rebate of $45 even more (88% vs. 12%). This indicates that the discount rate for the mail-in rebate was steep. Overall, this work suggests that consumers require a large monetary premium to accept a delayed mail-in rebate as compared with an instant payment.

Other studies have directly assessed consumers' reactions to delayed rebate payments. The results suggest that consumers primarily care about being paid in 30 days (Kim 2006; Soman 1998), perhaps because most bills are due in 30 days. Specifically, Soman (1998) finds that a 30- versus 15-day delay did not affect rebate purchases or redemptions. However, Kim (2006) finds that a 45- versus a 15-day payment delay lowered rebate evaluations and purchase intentions. Thus, it appears that a 30-day delay may be perceived as acceptable, but not longer.

The research on visual identification cited previously is relevant to the issue of whether consumers accurately identify nonstandard rebate payments. Nosofsky's (1986) research shows that when unfamiliar stimuli look like familiar exemplars, consumers may incorrectly classify the stimuli using more familiar categories. Traditionally, rebate payments were mailed as checks in standard labeled envelopes. However, some firms now use nonstandard payment mailers that are postcards or business reply cards, and they may visually resemble junk mail (FTC 2007b). The research on visual identification suggests that consumers may confuse these rebate payment mailers with junk mail and inadvertently discard them.

Policies Versus Research on Rebate Payment Processes

To summarize policies on rebate payment processes, the FTC and Texas (2007) mandate payment of rebates within the time specified or 30 days, North Carolina (2007) and New York (2005) mandate 60 days, and Washington (2009) mandates 90 days. Research on rebate payment timing indicates that consumers prefer to be paid in 30 days (Kim 2006; Soman 1998); even a 45 day delay lowered rebate evaluations. Likewise, research on the discounting of future payments shows that consumers view a payment to be worth increasingly less the more they have to wait (Frederick, Loewenstein, and O'Donoghue 2002; Thaler 1981). As a result, consumers require a substantial monetary premium to accept a delayed mail-in rebate compared with an instant rebate (Pyone and Isen 2011).

Washington requires payment mailers to be labeled. Extrapolating from the research on visual identification (Nosofsky 1986), consumers may misidentify a nonstandard payment mailer as junk mail and discard it, inadvertently forgoing their rebate payment. This research suggests that payments mailers should be labeled to reduce the probability of consumers accidentally discarding those mailers.

Research Gaps Related to Rebate Payment Processes

Perhaps the main research gap here is that nonstandard rebate payment mailers are increasingly used, and no study has examined them. Studies should determine whether nonstandard payment mailers lead to higher discard rates and lower deposit rates and, if so, what features are most problematic and what solutions are most effective. Field studies would be ideal, in which a rebate administrator randomly sends consumers the same rebate payment (i.e., for the same product, offer, and amount) using one of several mailer types and deposit rates are compared. The research proposition is as follows: the more a rebate payment mailer visually resembles junk mail (e.g., small mailer size, poor paper quality, return address nonspecificity), the lower the deposit rate; in contrast, prominently labeling the mailer as a rebate check from a firm will improve the deposit rate.

Summary of Rebate-Related Policies and Research Findings and Gaps

This article presents the first comprehensive, multidisciplinary review of consumer rebates that includes both U.S. federal and state public policies and academic research findings. We describe the federal regulations that are embodied in FTC rebate consent decrees and identify state rebate laws, many of which are recent (Table 1). Then, we summarize the main academic research findings relevant to rebates (Table 2) and identify important research gaps (Table 3). The Web Appendix provides details about the federal complaints and consent decrees and the state laws pertaining to rebates; it also lists numerous additional rebate bills that have been or are being considered by the various U.S. states. We highlight four main areas that have been the foci of concerns and policy reforms: (1) rebate advertisements, (2) rebate redemption disclosures, (3) rebate redemption processes, and (4) rebate payment processes.

With regard to rebate advertisements, policy makers have focused primarily on price claims. Some policies ban ads that state the lower after-rebate price, particularly if the savings amount is lacking, and/or require ads to state the higher before-rebate price and/or the mail-in requirement. The academic research indicates that banning ads with the lower after-rebate price should decrease consumers' focus on net prices during price comparisons (Compeau and Grewal 1998; Pechmann 1996) and decrease rebate purchases (Moorthy and Soman 2003), though effects on price comprehension are unknown. However, requiring ads to state the word "rebate" and/or the mail-in requirement should reduce miscomprehension (Nosofsky 1986). The effect of requiring ads to state the higher before-rebate price is uncertain, because a higher reference price can increase transaction value and purchase willingness (Bearden, Lichtenstein, and Teel 1984), but in the case of rebates, it also conveys the higher price that must be paid, and the net effect is unknown.

With regard to rebate redemption disclosures, policy makers have required disclosure of unusual and restrictive redemption criteria in ads, the basic redemption criteria on forms, and/or noncash payments. Policy makers have also required the provision of redemption forms at point of purchase, with the product and/or in rebate ads. The research indicates that it should be beneficial to provide redemption forms at purchase so consumers at least have the opportunity to read the redemption requirements. If consumers read the requirements, they may be less likely to purchase rebated products, and if they do purchase, they may be more likely to redeem and more satisfied (Silk 2004). However, due to the challenges inherent in information disclosure (Stewart and Martin 2004), more research is needed to determine if it is possible to create simple, color-coded forms with rebate redemption disclosures that consumers will truly read before purchase.

Regarding rebate redemption processes, policy makers have focused on providing enough time for consumers to submit redemption forms, typically mandating at least 14 or 30 days. However, the research indicates that the problem with redemption failure is not too little time but rather too much time (Ariely and Wertenbroch 2002; Shu and Gneezy 2010), though consumers tend to think the opposite (Shu and Gneezy 2010). Thus, policy makers should consider requiring no more than one to two weeks to redeem and also requiring disclosure of the deadline at purchase. Additional field studies may be needed, though, to convince policy makers of the need to change their policies mandating long deadlines for rebate redemption. Furthermore, policy makers have sought to protect certain consumer groups from being unfairly penalized by firms' fraud-fighting tactics (e.g., banning post-office box addresses), and related research indicates that policies that are perceived as unfair could be counterproductive and deter future rebate purchases (Campbell and Kirmani 2000; Silk 2004).

Finally, on rebate payment processes, policy makers have required payment within the time specified or a certain number of days, which has varied from 30 to 60 to 90 days. The research indicates that consumers generally prefer to be paid within 30 days (Kim 2006; Soman 1998) and that a 45 day delay is often too long (Kim 2006). This is in part because consumers discount future rebate payments; they realize money is worth more now than later (Frederick, Loewenstein, and O'Donoghue 2002; Pyone and Isen 2011; Thaler 1981). Policy makers have also mandated that payment mailers be labeled, which should lower misidentification of nonstandard mailers (Nosofsky 1986), but some research is needed to determine which nonstandard mailers are most problematic and why.

Overall, more research is needed on the prevalence of specific problems and concerns related to rebates. We were unable to identify any database on rebate complaints, so we advise that these data be collected for the population at large and for different consumer segments (e.g., on the basis of consumer age, ethnicity, state of residence), along with key rebate characteristics (e.g., product category, price, saving amount, online vs. in-store purchase). In addition, rebate ads, redemption forms, and noncompliance notifications should be coded to identify common and problematic content and clarity and reading levels.

Other areas of research beyond those discussed here could possibly be applicable to understanding consumer response to rebates, but their relevance is uncertain because studies are lacking. For example, according to prospect theory (Kahneman and Tversky 1979), it might be the case that consumers' purchases of rebated products reflect preference for a risky option (i.e., quality x for uncertain price y), which suggests consumers might possibly be in a loss mode. Later on, consumers might perceive the situation differently, which could explain certain failures to redeem. However, this is not known, because prospect theory has not been applied to rebates.

We hope that, by summarizing the extant research that is relevant to rebates and by identifying major research gaps, this article encourages more academic studies on rebates. In addition, by providing policy makers with a comprehensive overview of academic research, federal regulations, and state laws on rebates, we hope they will consider all of this information in their future policy decisions. Concerns about rebates are stimulating considerable legislative activity, and the laws that are enacted should be evidence based.

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