

Effect of effort and deadlines on consumer product returns

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Abstract

While extant research has examined return policies as a combination of time and effort, we investigate both the independent and interactive impacts of time and effort on consumer decisions to return or retain products. We find that decreasing return deadlines can have the counterintuitive effect of increasing return rates under some conditions. Using construal level theory, we propose that perceived effort (both physical and cognitive) mediates the effect of return policy on return rates leading to suppressed returns. Further, when deadlines are framed as durations between store visits, overall product returns are exacerbated except when perceived effort is high.

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In an effort to reduce product return costs, retail firms are moving toward stricter return policies. For example, the major retailer Costco, who formerly employed an indefinite return deadline, has now moved to a 90-day return policy on its computer items (MSNBC, 2007). Along similar lines, Sears has moved from returns accepted within a “reasonable period of time” in 2005 to a 30-day return policy for electronics and mattresses with proof of purchase, and to a 90-day return policy for most other goods (Merrick & Brat, 2005). Even some of the retail outlets that have generous return policies enforce strict return policies for a few of the product categories they sell. For example, JC Penney’s return policy for furniture is relatively short (seven days), but is much longer for many other products (60 days for jewelry and electronics, and 90 days for most other products). Sometimes retailers are forced to adopt a stricter return policy because their vendors are tightening return

policies offered to them (Stock, Speh, & Shear, 2002). In other cases, the high cost of product return handling, coupled with lower price realization of salvaged products, is a major impetus for marketers and retailers to institute policies to curb product returns. Approximately 9% of items purchased in the 2006 holiday season were returned (Chain Store Age, 2006). In an attempt to curb this proportion of returns, restrictions are now being leveled at the individual buyer, with some retailers using software programs to track customers who make large returns and to block some of them from returning items regardless of their store’s return policy (Tang, 2006). Another reason for tightening return policies is the high cost of handling product returns; this cost is now being passed on, in part, to some customers in the form of non-refundable return charges (Hess, Wujin, & Gerstner, 1996).

The vast majority of the current research on return policies is focused on developing optimal models to determine the conditions under which policies should be more lenient vs more restrictive (Che, 1996; Davis, Hagerty, & Gerstner, 1998). In contrast, one of the only behaviorally focused papers in this area (Wood, 2001) looks at online retail contexts and studies the effect of lenient return policies on time spent by consumers deliberating whether to purchase a product pre-purchase and whether to return an item post-purchase. Wood shows that

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deliberation time for items with a lenient return policy prior to product purchase is significantly lower, but that no differences in consumer deliberation time were found between restrictive and lenient return policies after purchase and during use of the product.

In this paper, we isolate and examine the effects of effort and deadline on return rates. The key question we examine is how return deadlines and required effort influence decisions to return or keep items. We use construal level theory to predict that return effort moderates the effect of temporal deadlines. Specifically, we show that individuals are more likely to return products when deadlines are shorter and effort requirements are lower. Returns are suppressed when deadlines are longer or when effort requirements are increased. We show that this is due to individuals' reluctance to apply effort (both physical and mental) to the process of returning products. We also show a reversal of this effect, such that individuals are more sensitive to return effort under longer rather than under shorter deadlines when the deadlines are framed as time between planned store visits. The following sections present a review of the relevant literature, empirical findings from several studies, and a discussion of the results and their implication for retailers and marketers.

Literature review and hypothesis development

Prior research (e.g. Posselt, Gerstner, & Radic, 2008; Su, 2009) has suggested that marketers alter return policies on three different dimensions to dissuade product returns: 1) return deadlines; 2) consumer effort required (in terms of bringing back original receipts and filled-in return forms); and, finally, 3) extent of return coverage (extent of money back due to shipping charges, inventory holding charges and re-stocking fees). While there exists a vast literature on the optimal way to design return policies (e.g. Padmanabhan & Png, 1995), there exists little research (e.g. Che, 1996) on impact of return policies on product choice, and even less research (e.g. Wood, 2001) on the effect of deadlines, effort and coverage on how consumers actually make return decisions.

Wood (2001) and Petersen and Kumar (2009) have examined leniency in return policies (which is a combined effect of lenient deadlines, low effort and high coverage) as compared to stricter return policies (defined by shorter deadlines, more effort and restrictive coverage). Wood found that lenient return policies reduced consumer deliberation time at the time of purchase, but did not increase deliberation time post-purchase. In a field experiment, Peterson and Kumar found that a lenient return policy not only increased the amount of purchases, but also decreased subsequent returns stemming from these purchases. While their research offers valuable insights, individual effects of deadline and effort on return rates are still unclear. We can infer the likely main effects of deadline and effort based on research in a closely related field, that of rebate redemption, which also requires individuals to exercise a decision to act within a specified deadline and under different effort conditions.

In the domain of rebate redemption, Silk (submitted for publication) suggests and finds main effects for deadlines and effort in reducing rebate redemption. We extend these rebate redemption results by replicating the main effects for effort and deadline in a product return context, examining the interactive effect of deadline and effort, and by showing the mediating role of perceived effort.

Construal level theory and return policy

Construal level theory or CLT (e.g. Friedman & Liberman, 2004; Liberman & Trope, 1998) posits that the perceived time to an event (or temporal distance) affects individual decisions by altering the mental representation of the events. The greater the temporal distance, the more likely these events will be represented using higher-order constructs such as the abstract and non-contextualized features. Conversely, shorter temporal horizons enhance lower order contextual representation. The analogy of moving from forests to trees applies here: the decision shifts focus from desirable characteristics to feasibility characteristics. In their seminal piece on this topic, Liberman and Trope (1998) asked individuals to imagine a short time horizon (next day) or a long time horizon (next year) and asked them to respond to decision scenarios such as selecting a furniture set, buying tickets for a show and choosing a word processor. They found that individuals in the shorter time horizon rated the feasibility aspects as more important (e.g., how the furniture would be delivered, price of tickets, convenience of timing), while participants in the longer time horizon condition rated the desirability attributes as more important (e.g., the design and color of the furniture, how interesting the topic is, speed of the word processor). Thus, as the time horizon decreased, individuals incorporated more peripheral features to their decision; under a longer time horizon, they focused on the central characteristics of the task.

In this research, we consider two important facets of return policy: return deadlines and return effort. Return deadlines are likely to behave as temporal deadlines and return effort (e.g., filling out forms, keeping receipts, driving long distances) is likely to be perceived as a low-level concrete and peripheral stimuli, similar to the feasibility characteristics proposed by Liberman and Trope (1998). It is fairly intuitive that increase in product return effort imposed by marketers should have a positive main effect on perceived effort. We are interested in the moderating effect of product return deadlines on this relationship. Construal level theory leads us to propose that:

H1. Higher return effort is likely to increase higher perceived effort when under shorter deadlines rather than under longer deadlines. Thus, the difference in perceived effort under different levels of effort is likely to be higher among shorter deadlines than under longer deadlines.

There is however, a different type of effort that individuals indulge in, namely *cognitive effort*, or the mental effort involved in making the decision to return or retain a product. A fairly established finding is that individuals postpone exercising cognitive effort under longer deadlines (e.g. Akerlof, 1991;

Garbarino & Edell, 1997). We investigate whether the reluctance to exercise cognitive effort is affected by product–return effort. Prior work in construal level theory suggests that the level of construal (whether represented abstractly or concretely) affects the time when the activity is performed (McCrea, Liberman, Trope, & Sherman, 2008), with individuals likely to procrastinate more when representation is more abstract than when concrete. Therefore, if return effort triggers a concrete representation of the decision, we propose the following moderating effect on procrastination:

H2. Longer deadlines are likely to increase procrastination when under lower return effort rather than under higher return effort. Thus, the difference in procrastination under different deadlines is likely to be higher under lower return effort than under higher return effort.

The combined effect of perceived effort salience and reluctance to use cognitive effort is likely to affect return behavior. Under conditions of shorter deadlines where the focus is likely to be on return feasibility, lower levels of effort required should enhance returns while higher levels of effort should suppress it. On the other hand, under longer deadlines where there is a tendency to procrastinate cognitive effort, lower levels of effort should suppress returns due to abstract representation while higher levels of required effort should enhance returns due to concrete representation. Hence, we suggest:

H3. Shorter deadlines should lead to higher return rates when under lower effort rather than under higher effort. Thus, the difference in return rates under different levels of deadline, are likely to be higher under less effort than under more effort.

Reversal in moderating effect of return effort when revisits are pre-planned

Roughly half the visits to retail stores are pre-planned visits (Bucklin & Lattin, 1991); that is, individuals plan their store visits ahead of time. Prior research (Gollwitzer, Heckhausen, & Steller, 1990) in the domain of goals, has shown that plans increase the likelihood of putting individuals in a more concrete rather than abstract mindset. While in a concrete mindset, individuals tend to focus on when, where and how to implement actions, rather than deciding which action to take. Pre-planned visits (or revisits to the store in our study) therefore are likely to induce more concrete representation than unplanned visits will. Is this mindset effect likely to influence subsequent product return decisions that have an effort and time component to it? Recent research by Malkoc, Zauberman, and Bettman (2010) suggests that mindset should influence subsequent product return decisions. They find that any mindset triggered by aspects of an earlier decision is likely to systematically influence the degree of present-bias in subsequent decisions whether they are in related or unrelated domains.

So how are individuals likely to incorporate return effort and return deadlines under a more concrete frame? To the degree that individuals indulge in balancing the “pros” and “cons” of a decision under a concrete frame (Liberman & Trope, 1998; Pennington & Roeser, 2003) we should see individuals consider

the disutility for effort (cost) with the discounted utility of a potential product return (benefit) while making a product return decision. Findings by Fujita, Trope, Liberman, and Levin-Sagi (2006), who examined the effect of invoking a construal (either abstract or concrete) on redeeming a gift certificate, found that individuals were systematic in how they responded to efforts and benefits. Specifically, they found that individuals in a concrete frame preferred a shorter deadline (that promised immediacy of rewards) and lower levels of effort cost. If trips are further apart, the disutility of the current effort should be more salient than the utility of the money obtained by exchanging the product in the future, and hence we propose:

H4. When trips are preplanned, longer deadlines should lead to lower return rates when under higher effort rather than under lower effort. Thus, the difference in return rates under different levels of deadline, are likely to be higher under high effort than under less effort.

The empirical section will be organized as follows: We provide evidence for H1–H3 by examining product returns both in a purchase context (Study 1) and in a return context (Study 2). In Study 3 we will induce concrete time horizons and show reversal of temporal effects and support for H4.

Study 1: Product returns in purchase-related context

In this study, we examine the role of effort and deadline in product returns. Similar to Wood (2001), we selected the pen product category as a return context that was both relevant and meaningful to the student population that would participate in the study. We asked individuals to make a choice between a gift card and the pen, either of which could then be exchanged for the other. This study design yielded two sets of individuals: the first set, who chose the pen and were then given a deadline within which to exchange pen for money if they wished; and the second set, who chose the gift card and were offered an option to buy the product at a discounted price within a deadline. This study allows us to examine the effects of deadlines and effort on the product–return decision (when individuals chose the pen) as compared to the effects of deadlines and effort on product purchase of a discounted item (when individuals chose the gift card). The study was designed to provide initial evidence for the interaction effect of time and effort on product returns (H3), and also to provide evidence for the mediating role of cognitive and physical effort (H1 and H2).

Method

Design

Two between-subjects factors were manipulated in this experiment: *deadline* and *return effort*, in a fully crossed 2(deadline) × 2(effort) design. The deadline to exchange the pens was either two days (short deadline) or seven days (long deadline). In the high-effort condition, individuals had to complete an online product return form prior to product exchange, while no such form was required in the low-effort condition.

Procedure

Participants came to the laboratory to complete an unrelated computer study. After completing this study, an experimenter thanked them for their participation, showed them a new pen, and mentioned that the university bookstore was contemplating adding the pen to its product line and needed feedback. The pen used is available for sale at leading retailers such as Wal-Mart and Amazon.com, but is not available at any stores within the vicinity of the university campus. The pen (called Penagain®) has a unique design that requires some trial before it can be evaluated. Consumers on Amazon.com have posted various positive and negative reviews about this pen; these reviews are shown in the appendix.

After examining the Penagain®, participants rated it on overall quality, writing flow, look, and feel of the pen. On completion of the pen evaluation survey, the participants were asked to choose between the pen as a thank you gift or \$3 gift card to the campus bookstore for their participation. They were subsequently informed that they could exchange whatever they chose at the university bookstore within a specified deadline, if they were dissatisfied with their choice. Participants who chose the pen were given a receipt from the bookstore and informed of the deadline (2 days or 7 days) within which they could exchange the pen for \$3 in cash, should they wish to do so. Half of these participants were in the high effort condition in which they were informed that they would need to go to a website, fill out and print a return receipt in order to make a product return. For those participants who chose the \$3 gift card, they were given a receipt and told that they could purchase the product at a discounted price of \$3 anytime within a given deadline.

Measures and covariates

Before the participants learned that they would receive the pen as a reward, they rated the pen using a 9-point scale (1 = very poor to 9 = excellent) in terms of overall quality, writing flow, look, and feel of the pen. In the follow-up online survey that was conducted seven days after the return deadline, all participants rated their feelings of being hurried (1 = not at all hurried to 9 = very hurried), how much they considered returning the pen for \$3.00 (1 = not at all to 9 = a great deal), the extent of procrastinating making the keep/return decision (1 = not at all to 9 = a great deal), the perceived cognitive effort they spent on making the decision to return or keep their chosen item (1 = not at all to 9 = substantial effort), the level of perceived physical effort in returning the product (1 = not at all to 9 = substantial effort) and whether or not they actually returned the pen (0/1). They were asked to indicate their return deadline, as an open ended question and that was coded as either correctly recalled or not. Finally, the participants responded to demographic questions and also recollected the return deadline that was mentioned in the receipt. Exchange (or not) of pens for money was the dependent variable.

Participants

Two hundred and seventy-six participants from a large public university in the southwestern U.S. completed the experiment for course credit in a required business course. Nearly half the respondents (54%) chose the pen, while the rest chose the gift card

(46%). Thus, we had an average of 34 participants in each of the eight conditions defined by choice (pen/\$3), effort (low/high) and deadline (2 day/7 day). A slight majority of the participants were male (57%) and the participants were a mean age of 21.4 years old.

Results

Manipulation checks

Participants in the shorter return deadline felt more hurried ($M_{2 \text{ days}} = 2.90$ vs $M_{7 \text{ days}} = 2.38$, $t(276) = 1.88$, one-tailed $p = 0.031$), and individuals in the higher effort condition perceived that the effort involved in exchanging the pen or \$3 for the other was higher ($M_{\text{Form}} = 4.51$ vs $M_{\text{No form}} = 3.61$, $t(276) = 3.21$, $p < 0.01$). Thus, the related manipulations worked as intended.

Concrete vs abstract

Concrete information is likely to be stored more accurately than abstract information. The degree to which individuals are able to accurately recall return deadline should be driven by factors that decrease perceptual distance: shorter return deadlines and higher return effort. We categorized individual recall of their return deadline into a binary variable (correct recall vs incorrect recall). The proportion of accurate recalls significantly varied by conditions and was consistent with construal level theory: more accurate levels of recall were associated with higher levels of effort ($P_{\text{Form}} = 93\%$ vs $P_{\text{No form}} = 78\%$, $\chi^2(276) = 5.2$, $p < 0.02$) and shorter deadlines ($P_{2 \text{ days}} = 92\%$ vs $P_{7 \text{ days}} = 79\%$, $\chi^2(276) = 4.5$, $p < 0.04$).

Exchange rates

Overall exchange rates were lower for those individuals who chose the gift card as compared to those who chose to receive the pen ($P_{\text{returns for pen}} = 9\%$ vs $P_{\text{returns for \$3}} = 1\%$, $\chi^2(276) = 7.26$, $p < 0.01$). There is no main effect of deadlines or effort for those who chose to receive the gift card. Specifically a logistic regression of returns, for those who chose gift card — by deadlines, effort and the interaction of deadline and effort — resulted in a non-significant model ($\chi^2(3, 121) = 3.69$, $p = 0.29$). This could be because the initial quality evaluations of the pen were significantly lower for those that eventually chose the gift card ($M_{\text{giftcard choice}} = 4.7$ vs $M_{\text{pen choice}} = 5.3$, $t(276) = 2.23$, $p = 0.021$). Hence if they initially considered the pen to be of lower quality, they are less likely to purchase it under a stricter deadline or with higher effort. Since this group's decisions are not vital for testing our hypotheses, we will not discuss their results and instead concentrate on those participants that chose the pen.

Isolating those individuals who chose the pen, the return rates across the four different conditions are plotted in Fig. 1. We find that under low effort and shorter deadlines, return rates are higher than they are in the other conditions.

Process mediation

While a direct mediation model is not possible with a binary dependent variable and the interactive nature of our theory, we ran three regression models to look for indirect mediation. For

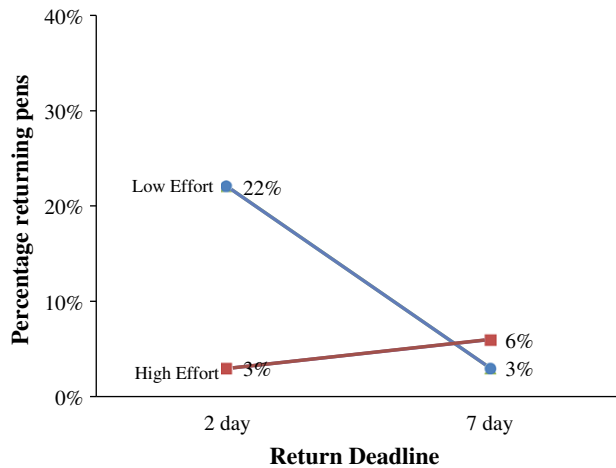


Fig. 1. Percentage of participants returning pen for \$3 in Study 1.

all regressions described below, the independent variables include deadline, effort and the interaction of deadline and effort. The first regression model, a logistic regression predicting product returns (0/1), yielded an overall significant model ($\chi^2(3, 147) = 12.8, p < 0.01$) with a correct hit rate classification of 90%. Further, while the main effects of deadline ($\chi^2(1, 147) = 1.1, p = 0.31$) and effort ($\chi^2(1, 147) = 0.88, p = 0.34$) were not significant, the deadline by effort interaction was significant ($\chi^2(1, 147) = 4.6, p = 0.027$). Contrasts revealed that, in support of H3, shorter deadlines and lower levels of effort increase returns ($P_{\text{No form, 2 days}} = 22\%$ vs $P_{\text{Form, 2 days}} = 3\%$, $\chi^2(1, 147) = 7.3, p < 0.01$), while there was no effect of effort under longer deadlines ($P_{\text{No form, 7 days}} = 3\%$ vs $P_{\text{Form, 7 days}} = 6\%$, $\chi^2(1, 147) = 0.43, p = 0.60$).

The second set of regressions was conducted using the two independent variables and their interaction to predict the two potential mediators: perceived cognitive effort ($F(3, 147) = 15.34, p < 0.01$) and perceived physical effort ($F(3, 147) = 3.56, p < 0.01$). Table 1 reports the parameter estimates for each of the regression models. The significant interaction effect of deadline by effort on perceived cognitive effort supports H2. However, interaction effect of deadline by effort on physical effort is not significant; thus, H1 is not supported in this instance.

Specifically, individuals perceived that they spent more time thinking about their decision (cognitive effort) when the deadlines were long than when deadlines were short ($M_{2 \text{ days}} = 2.23$ vs $M_{7 \text{ days}} = 3.8, t(151) = 5.64, p < 0.01$). Figs. 2a and b below plots the perceived cognitive effort for the deadline x effort interaction.

Table 1
Parameter estimates of OLS regressions considering cognitive effort and perceived physical effort as dependent variables.

	Perceived cognitive effort			Perceived physical effort		
	β	t	p	B	t	p
Intercept	3.1	21.6	<0.01	4.4	23.9	<0.01
Return deadline	-0.80	5.6	<0.01	-0.14	0.73	0.47
Return effort	-0.38	2.7	<0.01	0.59	3.1	<0.01
Return deadline*effort	0.31	2.2	0.02	-0.14	0.72	0.47

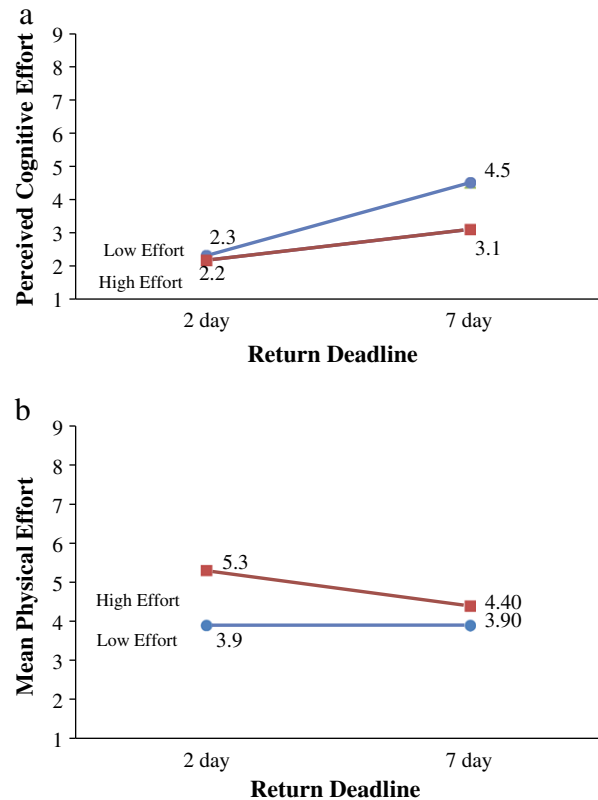


Fig. 2. a. Mean rating of perceived cognitive effort in Study 1. b. Mean rating of perceived physical effort in Study 1.

As can be seen in Fig. 2a, cognitive effort is highest when effort is low and the deadline is shorter. The perceived physical effort (Fig. 2b) is higher when an online form is required ($M_{\text{No form}} = 3.9$ vs $M_{\text{Form}} = 5.07, t(151) = 3.14, p < 0.01$).

The third regression was a logistic regression using product-return decision (0/1) as the dependent variable, and including the potential mediators of cognitive effort and physical effort as covariates. The overall model was significant ($\chi^2(5, 145) = 23.11, p < 0.01$). Further, while cognitive effort ($\chi^2(1, 145) = 4.8, p = 0.021$) and physical effort ($\chi^2(1, 145) = 3.9, p = 0.045$) were significant, the interaction term of deadline by effort was no longer significant ($\chi^2(1, 145) = 2.7, p = 0.1$) after including the covariates. This provides more direct evidence for the mediating effect of perceived cognitive and physical effort. Thus, a combination of short deadlines and low effort leads to an environment that is conducive to product returns. If however, the perceived effort is increased, be it higher physical effort due to effort requirements or higher cognitive effort under longer deadline, product returns should decrease.

Discussion

This study provides initial support for the interactive effect of effort and deadline on product returns (H3). We find support for the interaction effect of deadlines and effort on cognitive effort (H2) but not on perceived effort (H1). However, we find that our results support dual mediation model of perceived cognitive and perceived physical effort (H1 and H2) in transferring the effects of

deadline and requirement of an online form on product returns. However, one could still make the argument that the individual product-return decisions are similar to other decisions that involve deadlines and effort, such as product purchase. To investigate this possibility, we ran a follow-up study with 54 participants who participated in one of two between-subject conditions. The only change from Study 2 was that we gave individuals the bookstore gift card (instead of giving them a choice between the pen and the gift card) as a thank you gift for participating in the unrelated studies and offered the participants a chance to buy the pen using the gift card within 1 day (short deadline) or 14 days (long deadline). This resulted in approximately 27 individuals in each of the short and long deadline conditions. Further, effort was maintained at the low effort level in that no online form was required to be printed to buy the pen. Results indicated that pen purchase was not affected by deadline ($P_{\text{No form, 1 day}}=4\%$ vs $P_{\text{No form, 7 days}}=6\%$, $\chi^2(1, 53)=0.13$, $p=0.73$). Taken together, these results and those of Study 1 suggest that product returns are different from a context such as product-purchase, at least within the context of the products we examined.

Petersen and Kumar (2009) show that returns are likely to be different when items are received as gifts as compared to when they are purchased; Study 2 was designed to address this issue.

Study 2: Product returns in a gifting context

In this study, we examined the effect of return deadlines and return effort on product returns in a gifting context. In addition, we wanted to replicate the effect of deadlines and effort on returns.

Design and procedure

The basic design, manipulations and measures were similar to the first study: there were two between-subjects factors, *deadline* (2 days/7 days) and *return effort* (no online form required/online form required). In the high-effort condition individuals had to complete an online product return form prior to product exchange, while in the low-effort condition no such form was required for product return. The procedure for this study was similar to Study 1 in that the participants signed up to complete an unrelated series of studies, one of which was rating the Penagain® pen. A key modification to the procedure from Study 1 was that instead of getting individuals to choose between a gift card and a pen, we gifted individuals the pen that they could exchange for \$3 within a deadline. All participants completed a follow-up online survey seven days after receiving the pen (i.e., after the return deadline for both deadline conditions), which asked them to provide additional information about their return decision. In this study we asked individuals to indicate the total perceived effort (1=not at all to 9=a great deal) they felt in the return decision rather than the individual amounts of physical effort and cognitive effort they felt as operationalized in Study 1. All other measures such as level of procrastination were similar to the previous study.

One hundred twenty-eight participants from a large public university in the southwestern U.S completed the experiment for course credit in a required business course. There were

approximately 32 participants in each of the four conditions. A majority of the participants were male (70%) and the participants had an average age of 22.7 years old.

Results

Manipulation checks

Participants in the shorter return condition felt more hurried ($M_{2 \text{ days}}=3.26$ vs $M_{7 \text{ days}}=2.49$, $t(128)=1.88$, one-tailed $p=0.03$) and participants who were required to complete the online form perceived higher effort ($M_{\text{No Form}}=4.96$ vs $M_{\text{Form}}=5.90$, $t(128)=1.96$, one-tailed $p=0.02$), suggesting that the manipulations impacted deadline and effort in the predicted manner.

Concrete vs abstract

Similar to Study 1, we categorized individual recall of their return deadline into a binary variable (correct recall vs incorrect recall). The proportion of accurate recall varied based on deadline and effort conditions: more accurate levels of recall were associated with higher levels of effort ($P_{\text{Form}}=91\%$ vs $P_{\text{No form}}=76\%$, $\chi^2(128)=5.5$, $p<0.02$) and shorter deadlines ($P_{2 \text{ day}}=90\%$ vs $P_{7 \text{ days}}=76\%$, $\chi^2(128)=4.8$, $p<0.03$).

Exchange rates

The effect of a concrete effort on product-return behavior is displayed in Fig. 3, which plots the proportion of product returns in manner similar to Fig. 1. Return rates are higher for shorter rather than longer deadlines when the effort required is lower. However, the opposite pattern occurs for higher required effort; in these cases, longer deadlines lead to increased product return rates. Thus, the effect of deadline on products returns is moderated by effort.

To test the significance of these results, we ran a logistic regression predicting returns (0/1) with deadline (two days/seven days), effort (low/high) and a deadline by effort interaction. To correct for the fact that one of the cells had no returns (two day/high effort), we used the Firth Bias adjusted estimates as recommended by Firth (1993). The overall model was significant ($\chi^2(3, 124)=13.6$, $p<0.01$) and that there was a main effect for effort ($\chi^2(1124)=3.86$, $p=0.044$), a non-significant main effect

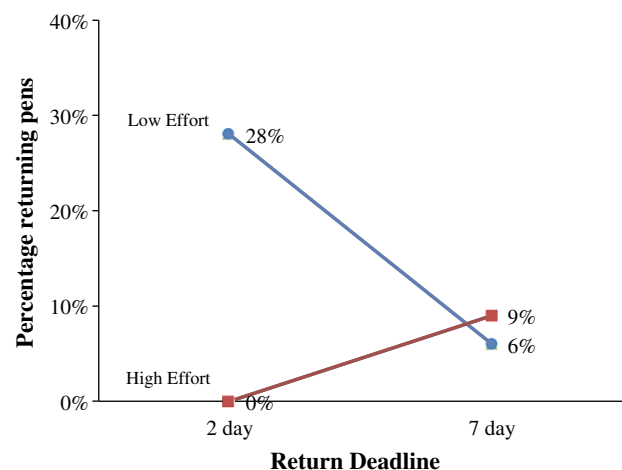


Fig. 3. Percentage of participants returning pen for \$3 in Study 2.

for deadline ($\chi^2(1124)=0.04, p=0.71$), and more importantly a significant interaction effect of effort by deadline ($\chi^2(1124)=6.46, p<0.01$). In support of H3, we found a greater significant difference between deadlines under low effort ($P_{\text{No form, 2 days}}=28\%$ vs $P_{\text{No form, 7 days}}=6\%$, $\chi^2(62)=5.3, p=0.018$) than under high effort ($P_{\text{Form, 2 days}}=0\%$ vs $P_{\text{Form, 7 days}}=9\%$, $\chi^2(66)=2.95, p=0.10$).

Process mediation

We conducted a second regression model with perceived effort as the dependent variable and effort, deadline and their interaction as the independent variables; the overall model is significant ($F(3, 124)=2.9, p=0.038$) with a hit rate classification of 91%. The main effect for effort and interaction effect of effort by deadline ($F(1, 124)=4.44, p=0.037$) were significant ($F(1, 124)=4.39, p=0.036$), but main effect for deadline was not significant ($F(1, 124)=0.23, p=0.63$). Fig. 4a plots the average (mean) perceived overall effort by return deadline, with a separate curve for each level of effort. In support of H1, perceived effort is higher for shorter deadlines under higher physical effort ($M_{\text{Form, 2 days}}=6.55$ vs $M_{\text{Form, 7 days}}=5.29, F(1, 124)=3.54, p=0.049$), but not under lower physical effort ($M_{\text{No form, 2 days}}=4.57$ vs $M_{\text{No form, 7 days}}=5.33, F(1, 124)=1.26, p=0.26$).

Another regression predicting procrastination from a full factorial of effort and deadline resulted in an overall significant model ($F(3, 124)=3.9, p=0.013$), a significant main effect for effort ($F(1, 124)=6.74, p<0.01$), a non-significant main effect for

deadline ($F(1, 124)=1.01, p=0.31$), and a marginally significant interaction effect of effort by deadline ($F(1, 124)=3.04, p=0.08$) in support of H2. Fig. 4b plots the mean extent of procrastination similarly to Fig. 4a. Thus, H2 is supported: procrastination is higher under longer deadlines combined with lower physical effort ($M_{\text{No form, 2 days}}=4.85$ vs $M_{\text{No form, 7 days}}=6.4, F(1, 124)=3.7, p=0.047$), but not under longer deadlines combined with higher physical effort ($M_{\text{Form, 2 days}}=4.37$ vs $M_{\text{Form, 7 days}}=4.0, F(1, 124)=0.02, p=0.80$).

A mediation analysis similar to one run by Baron and Kenny (1986), or even a modified one for logistic regression as suggested by MacKinnon and Dwyer (1993), is not possible since we are examining the mediating role of perceived effort and procrastination on the interaction term of effort and deadline. However, we note that the significance of the effort by deadline interaction terms drops (from $\chi^2(1, 124)=6.46, p<0.01$ to $\chi^2(1, 122)=3.6, p=0.06$) on inclusion of two mediators: perceived effort ($\chi^2(1, 122)=3.49, p=0.05$) and procrastination ($\chi^2(1, 122)=5.2, p=0.02$).

Discussion

This study revealed that when less return effort is required (as defined by not having to complete a product return form), shorter deadlines counterintuitively lead to higher return rates. However, on inclusion of a product return form that increases return effort, the impact of return deadline is suppressed: that is, shorter deadlines lead to lower return rates in this situation. We also show evidence that perceived effort is higher under shorter deadlines and higher physical effort, and procrastination is higher under longer deadlines and lower physical effort. We will address a few potential counter-arguments that could be made about our results.

Can individuals predict the effects of effort and deadlines on return decisions in order to take preventive measures? To answer this question, we ran a hypothetical version of Study 2 among 96 total participants who were randomly allocated to one of four conditions of a Deadline (2-day/7-day) x Effort (No form/Form) between-subject design. Similar to Study 2, individuals provided initial quality ratings for the pen; however, these individuals were asked to imagine that they had received the pen as a gift from the bookstore rather than actually receiving a pen as in Study 2. They were then told to imagine that, on further usage of the pen, they were somewhat dissatisfied with the item. They were then asked to indicate using a 7-point scale (1=very unlikely to 7=very likely) their perceived likelihood of returning the pen within the deadline, with or without a product return form as defined by their condition. The mean ratings across the four conditions showed no significant differences ($M_{\text{No form, 2 days}}=4.3$ vs $M_{\text{No form, 7 days}}=4.6$ vs $M_{\text{Form, 2 days}}=3.9$ vs $M_{\text{Form, 7 days}}=4.1, F(3, 93)=0.39, p=0.75$). This suggests that individuals cannot predict how they are likely to behave, and their intention to return or keep an item is equally likely under high vs low effort or under short vs long deadlines.

Do Study 2 results generalize to other effort manipulations? To test this, we ran a short follow up study, in which we asked individuals in four different breakout sections of an introductory

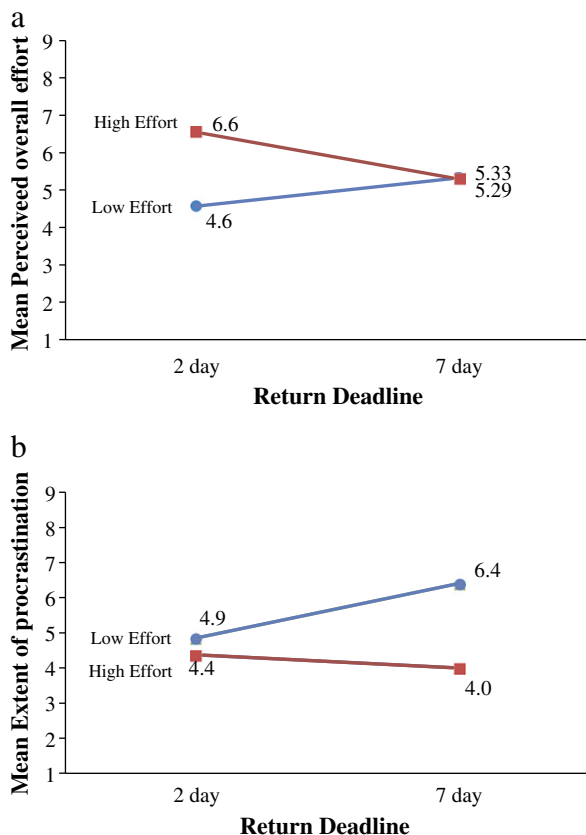


Fig. 4. a. Mean rating of perceived overall effort in Study 2. b. Mean rating of extent of procrastination in Study 2.

marketing course to fill out a series of surveys during a session on marketing research. The breakout sections were about 20–30 students in size. Two of these sections were part of the business school, and hence students were from the business school and spent their time in the vicinity of the room where they could make product exchanges. The other two sections were part of the retailing school located several blocks away; these students in these sections did not frequently attend classes in the business school. On completion of the surveys, the students were given a pen as a reward, and told that they could exchange it for \$3 within a short deadline (2 days) or a long deadline (14 days). Returns for the business school students (with more return opportunities and lower return effort), were higher for the 2-day deadline (6 of 30 students returned the pen) as compared to the section that had a 14-day deadline (1 of 25 students returned the pen). However, for the retailing school students (who had to walk several blocks for an exchange and also had fewer opportunities to come to the school) return rates were not different between deadline conditions (0 of 28 students for the 2-day deadline as compared to 2 of 27 students for the 7-day deadline). These results replicate the main findings in Study 2 with a different type of effort manipulation. Thus, the operationalization of the effort manipulation is unlikely to be the reason for the suppressed returns under higher effort.

Study 3: Concrete time horizons and temporal reversals

This study was designed to examine the role of preplanned trips on return effort and deadlines. In this study, we asked individuals to sign up for two studies, and hence the time horizon for the study was made more concrete. Fixed and salient time horizons were created by requiring participants to make two trips to the research lab, ensuring that the only physical effort that was expended would be filling out an online form. Thus, if concrete representations are induced, then according to construal level theory we should induce a cost-benefit analysis (“pros” vs “cons” consideration) of the return decision. To the degree that the cons are lower when an online form is not required, we should see exacerbated returns. However, when an online form is required and a concrete frame is induced, returns should be made by comparing the higher effort with the current value of the benefit, which should be susceptible to deadlines. This study, therefore, directly tests the reversal of temporal effects predicted by H4.

A significant proportion of returns in the retail context are product exchanges (Davis, Gerstner, & Hagerty, 1995); that is, products are exchanged for other products in the store by way of store credit rather than for money. Hence in this study, we explored the extent of product-exchange as the dependent variable. A potential issue with the previous studies was that the pen we used was an uncommon pen that required time to evaluate: longer return deadlines that afforded more time for product trial could increase product learning. In this study, we address this issue by using pens with which the participants would be already familiar. To select pens for the study, a pilot was conducted among 41 participants with pens that were available at the university bookstore and which were rated by the bookstore as the top selling pens. Participants rated the six

top selling pens at the bookstore on overall evaluation (1 = poor to 9 = excellent) and conjectured an estimated retail price and their maximum willingness to pay for the specific pen (in dollars and cents). Mean overall evaluation for all six pens varied from 4.9 to 6.6 on a 9 point scale; we selected the pen with a modest overall evaluation ($M=5.5$) as the pen to be received initially and the best pen ($M=6.6$) to be the pen offered for exchange ($t(39)=3.99$, $p=0.043$). The participants estimated a lower retail price ($M_{\text{initial}}=\$1.80$ vs $M_{\text{alternative}}=\$4.42$; $t(40)=5.7$, $p=0.032$) and were willing to pay less ($M_{\text{initial}}=\$1.31$ vs $M_{\text{alternative}}=\$2.31$; $t(40)=3.3$, $p=0.047$) for the initial pen than for the alternative. Thus, the initial pen was pleasing, but the alternative pen was considered to be better in terms of initial evaluation and estimated value.

Method

Design

Similar to the previous studies, *deadline* and *effort* were manipulated in a between-subjects design. Participants signed up for two unrelated studies separated by three hours or one week; they were told that they could make the pen exchange when they revisited the lab to complete the second study. The deadline to exchange the pens was therefore either three hours (a short deadline) or one week (a long deadline). Effort was varied as before via a requirement of filling out an online form (required/not required). Finally, an immediate condition was added; in this condition, subjects were required to make the exchange decision before leaving the lab (i.e., immediately), which served as a control condition to gauge the general preference for the two pens. This resulted in five conditions for a $2(\text{deadline}) \times 2(\text{effort}) + 1$ (immediate condition as control) between-subjects design.

Procedure

After completing an unrelated paper and pencil survey, an experimenter thanked participants and gave them a pen as a thank you gift. The experimenter then showed the participants the higher quality pen (that had the highest ratings in the pilot study) and said that she had run out of these pens but would have some more brought to the lab within the next 30 min. Participants were then told that they would have the opportunity to exchange pens during the second study. All participants were given a form as proof that they participated in the experiment. On this form, the experimenter wrote the time of the second study, so that the participant would not forget the exact date and time in which they had to return. For the participants in the high effort condition, a website location was provided on the receipt, where they could print an online form to exchange pens. One week after they participated in the final study, the participants completed an online survey asking them about their pen exchange decision and their reasons for keeping or returning the pen. Participation in this online survey was required for all participants (regardless of whether they kept or returned the pen) to receive credit for their participation.

Measures and covariates

An additional process indicator variable was included to determine what impacted exchange decisions. After indicating

their decision to keep or return the initial pen for the offered pen, the participants were given a checklist of possible reasons for either keeping or returning the initial pen; they could check as many as applied to their decision. Possible reasons for returning a pen were “I didn’t like the pen I got initially,” “My friend asked me to exchange pens,” “I was reminded by coming to Part II of this study,” “The other pen was worth the effort of exchanging,” and “It was easy to return.” Possible reasons for keeping a pen were “I thought about it but never got around to it,” “It wasn’t worth my time,” “The initial pen performed well,” “Too much effort to exchange,” “I didn’t want the other pen,” and “I forgot.” Finally, whether or not a participant exchanged pens was the main dependent variable.

Participants

One hundred fifty three student participants, across the five different between subject conditions (there were 22 in the immediate condition and the rest were equally spread across the four conditions), from a large public university in the southwestern US completed the experiment for course credit in a required business course. Roughly half the participants were female (48%), and the participants had an average age of 21.8 years.

Results and discussion

Manipulation checks

Participants with a shorter return deadline felt more hurried than those with a longer deadline ($M_{3\text{ h}}=3.67$ vs $M_{7\text{ days}}=2.86$; $t(131)=1.81$, single-sided $p=0.04$), and those in the higher effort condition did perceive the effort to be higher ($M_{\text{No form}}=2.55$ vs $M_{\text{Form}}=3.40$; $t(131)=1.81$, single-sided $p=0.02$). Thus, the manipulation of these factors worked as intended.

Concrete vs abstract

The study was designed to ensure that deadlines would be salient. This would mean that recall of deadline should be much more accurate. Similar to the earlier studies, individual recall of return deadline was classified as a binary variable (correct recall vs incorrect recall). The proportion of accurate recalls did not vary by condition ($P_{\text{No form}, 3\text{ h}}=96\%$ vs $P_{\text{Form}, 3\text{ h}}=95\%$ vs $P_{\text{No form}, 7\text{ days}}=90\%$ vs $P_{\text{Form}, 7\text{ days}}=93\%$, $\chi^2(3, 127)=0.35$, $p=0.76$), indicating that the manipulation did indeed ensure that the return deadline was salient.

Exchange rates

In order to examine the effects of effort and deadline, a logistic regression was conducted on the binary variable “exchange” as the dependent variable and manipulated dichotomous variables of time, effort and time by effort interaction as independent variables. The regression resulted in a significant overall model ($\chi^2(3, 127)=58.1$, $p<0.01$) with a hit rate classification of 66%, as well as a significant main effect for effort ($\chi^2(1, 127)=45.0$, $p<0.01$), a significant main effect for deadline ($\chi^2(3, 127)=7.9$, $p<0.01$) and a marginally significant effect for the interaction of deadline and effort ($\chi^2(3, 127)=2.9$, $p=0.08$). Fig. 5 plots the rates of exchanging pens against return deadline with a separate curve for the effort condition (note that the immediate condition is

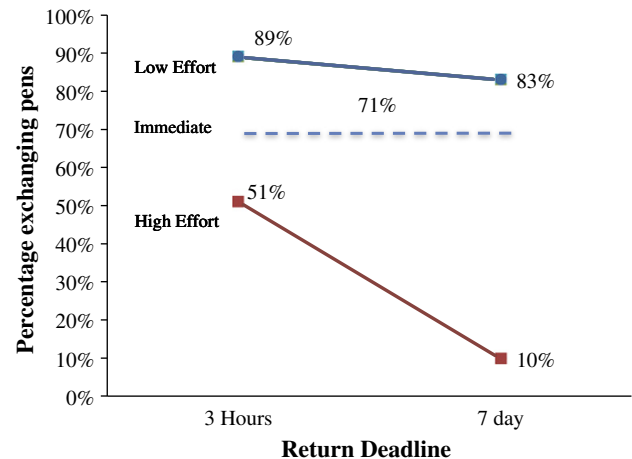


Fig. 5. Percentage returning pens for new pen within deadline in Study 3.

indicated with a straight dotted line that serves as a baseline for returns without any deadline). When effort is low, there is no effect of deadline ($P_{\text{No form}, 3\text{ h}}=88\%$ vs $P_{\text{No Form}, 7\text{ days}}=83\%$, $\chi^2(68)=0.54$, $p=0.45$). However, when effort is high, the exchange rates are suppressed significantly ($P_{\text{Form}, 3\text{ h}}=51\%$ vs $P_{\text{Form}, 7\text{ days}}=10\%$, $\chi^2(63)=13.5$, $p<0.01$), with higher deadlines resulting in significantly lower exchange rates. These results support H4.

These results indicate that when effort is low and concrete representation is induced, deadlines have little effect. However when effort is high, a tradeoff between current costs and delayed benefits is susceptible to deadlines. When the participants have only three hours between sessions, they can probably visualize the benefit (of redeeming the higher value pen) and hence are more likely to exercise higher effort. However, when the deadline is longer between sessions and because effort precedes benefit, a comparison of current effort cost vs a delayed, discounted benefit is likely to result in a negative net utility that favors postponing exercising effort. To the degree that postponement results in higher levels of forgetting (Krishnan & Shapiro, 1999), we found lower levels of product exchange under longer deadlines in this study.

Process indicators

In order to understand how participants made their return decisions, we examined the stated reasons for returning or keeping the initial pen. Given that so few kept the pen in the low effort condition, we only examined the stated reasons for returning their pens. Only one reason (“reminded by revisiting the lab”) was significantly different between deadline conditions ($P_{\text{No form}, 3\text{ h}}=21\%$ vs $P_{\text{No form}, 7\text{ days}}=47\%$, $\chi^2(131)=3.85$, $p=0.045$). In the high effort condition, since most kept the pen they were given (at least in the 7 day condition), we examined reasons for keeping the pen. The only significant reason that differed across deadlines was “returning the pen wasn’t worth the effort” ($P_{\text{Form}, 3\text{ h}}=15\%$ vs $P_{\text{Form}, 7\text{ days}}=51\%$, $\chi^2(131)=4.6$, $p=0.018$).

Discussion

Inducing concrete representation by asking individuals to come for two different studies reversed the temporal effects by

forcing individuals to access the effort involved in exchanging pens relative to the benefit of getting the better pen. Our findings provide support for H4: a reversal of temporal effects. We also show process measures supporting the prediction that individuals procrastinate making their decisions under longer deadlines, leading to lower exchanges. We also looked at the proportion of people who filled out the online form, irrespective of exchange, to check and see whether individuals actually defaulted in filling out the form or in making the exchange. We found no significant differences for the 3-hour condition (51% filled out online forms and exchanged pens) or in the 7-day condition (30% of the respondents filled out online forms and only 10% exchanged pens, $p=0.15$).

General discussion

This research addresses the important issue faced by managers; that is, the notion of reverse product flows and the effect of return policies on consumer behavior. Managing reverse flow of products (i.e., product returns back to the firm) is often expensive, and firms are continually looking at ways to reduce product returns. Retail firms are adopting stricter return policies to curb inappropriate returns through increasing the cost of returning the item (monetarily or through effort) and/or reducing the time available to consumers for product return. Prior research has not isolated the effect of product return deadlines, but has instead studied strict return policies as a combination of the higher cost and reduced time deadlines. Our studies isolate and examine the effect of increasing the product return deadline. We found that decreasing the product return deadline had the counterintuitive effect of leading to an increase in product return rates in some cases. On a theoretical level, our research is the first to predict the effect of two important aspects of return policy (namely deadline and effort), using construal level theory. The theory leads us to predict the mediating role of perceived effort (physical and cognitive) in explaining the effects of return policy on return propensity. We also suggest and find that preplanned trips leads to an activation of a concrete mindset that then leads individuals to tradeoff one aspect of return policy (effort) with the discounted benefit of returns (due to another aspect of policy namely deadlines). We are now able to provide further evidence for a line of thinking suggested in prior work (Shu & Gneezy, 2010; Wood, 2001), that there are occasions when making a return policy less lenient can have negative consequences.

We based our research on construal level theory in which we suggest that constraints in return time imposed by marketers act as temporal deadlines while return effort acts as a concrete stimulus. We hypothesized that return effort moderates the effect of return deadline on perceived effort (support for H1 in Study 2 and partly in Study 1), cognitive effort (support for H2 in Study 1 and Study 2) and product returns (support for H3 in Study 1 and Study 2). Further, we also show that planned revisits to the store (H4) lead to fewer product exchanges under

conditions of high effort/longer deadline rather than high effort/shorter deadline (support in Study 3).

In order to examine a real-life product return situation, we analyzed sales and return data from a large, southwestern public university bookstore that had recently instituted a shorter return policy. Before the return policy change, data indicated that returns in general ranged anywhere from negligible to about 19%, depending on the type of item. For example, return rates ranged as follows: 6% for computer bags, 7% for used books, 9% for new textbooks, and 19% for dictionaries. In an effort to discourage returns, in the fall of 2006, the bookstore changed its return policy deadline for new textbooks from 30 to 12 days relative to the beginning of the semester. While they expected that this policy would substantially reduce the rate of returns, rates actually increased significantly from 5.8% during Fall 2005 (with the 30-day return policy) to 6.6% in Fall 2006 (with a 12-day return policy; $\chi^2(1)=75.2, p=0.04$). This percentage increase in returns translates into approximately \$52,000 in lost revenue for one semester of textbook sales and thus, overall lost sales would be over \$100,000 for the regular academic school year (not including winter and summer sessions). The examination of the reasons for the returning behavior revealed the interesting fact that more than 50% of the students had returned a given book without dropping the associated class (the drop date for classes was well after the store return date) and mentioned reasons for the return such as not needing the book or having found a cheaper book. Thus it is possible that their decision to return the item was independent of the decision to drop the class, and perhaps was influenced by the reduced time frame. While these data are not conclusive, they are consistent with the prediction that decreasing return deadlines may have an effect opposite of the one intended. That is, decreasing deadlines may actually *increase* return rates. This uptick in return rates due to the shorter deadline, actually reversed the trend their return rates which had been falling (7.1% in 2003, 6.7% in 2004 and 5.8% in 2005).

Certain retail stores, such as Wal-Mart, are more frequently visited than other specialty stores such as Best Buy. Our findings suggest that the tendency to procrastinate is likely less of a concern for frequently visited stores (akin to shorter time between revisits to the lab), and hence a higher effort might not be a significant factor in reducing returns for these stores. However, for specialty retailers (who are infrequently visited and hence have longer duration between revisits) aiming to increase traffic to the store by offering generous return policies, longer deadlines and higher effort requirements are likely to help reduce returns.

While this study examines an important marketing phenomenon, it was not possible to examine all possible mediators and moderators that are relevant to specific retail contexts. A potential area for future research is the role of payment on product returns. Gourville and Soman (1998), for example, provide evidence for payment depreciation in which a consumer gradually adapts, over time, to the price paid for an item. Thus, longer deadlines may lead to lower return rates because the cost of the item feels less severe to the consumer, over time, and is therefore less of a motivation to return an item. Along similar lines, it is likely that store policies that

increase salience of product payment or return deadlines, for instance by requiring cash-only payment or mentioning strict return policies on product receipt, might also influence product returns. Future research in this domain, therefore, will greatly help retailers and manufacturers in using return policies to influence consumer attitudes toward their products, not only prior to product purchase, as studied in prior research, but also during product consumption and use. While the studies do

suggest that perceived effort should influence returns in both purchase and gifting contexts, our studies involved participants receiving a pen that they could then return in exchange for money. Therefore caution needs to be exercised while extending these results to a purely purchase context, and more research in this area can clarify if the strength of the underlying mechanism of perceived effort is likely to vary between the contexts.

Appendix

Description of Penagain®

[Hello. Sign in to get personalized recommendations.](#)
[New customer? Start here.](#)
[FREE 2-Day Shipping. No Minimum Purchase](#)

[Your Amazon.com](#)
[Today's Deals](#)
[Gifts & Wish Lists](#)
[Gift Cards](#)
[Your Account](#)
[Help](#)

[Shop All Departments](#)

[Search](#)

[GO](#)
[Cart](#)
[Your Lists](#)

[Office Products](#)
[Browse Brands](#)
[Bestsellers](#)
[Furniture](#)
[Ink & Toner](#)
[Office Electronics](#)
[Office Supplies](#)
[Printers](#)
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[Today's Deals](#)

This item is not eligible for Amazon Prime when purchased from Marketfair Stationery. [See more buying choices](#)

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PenAgain Ergo-Sof
PA015-111

Other products by [PenAgain](#)

In stock.
Processing takes an additional 4 to 5 days for orders from this seller. Ships from and sold by [Marketfair Stationery](#). Gift-wrap available.

Product Details

Product Dimensions: 4 x 1.8 x 0.8 Inches ; 0.5 ounces
Shipping Weight: 0.5 ounces
ASIN: B00067X9KK

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[Add to Wish List](#)
[Add to Shopping List](#)
[Add to Wedding Registry](#)
[Add to Baby Registry](#)
[Share with Friends](#)

Product Specifications

Brand Name:	PenAgain
Manufacturer Part Number:	PA015-111

The most helpful favorable reviews

★★★★★
The bad news is the stroke I experienced. I lost all control in my right hand, and writing was not possible. But with PenAgain I am able to write.

★★★★★
It is light-weight. Softly fits into the pads of my fingers, and confirms easily around my index finger. I enjoy the "soft feel" of it as I write.

★★★★★
I have arthritis in my fingers, and the PenAgain has made handwriting so much more comfortable. I take it to meetings and it gets noticed!

The most helpful critical reviews

★★★★★
The mechanism broke within 20 uses. With the tip retraction mechanism malfunctioning, I can barely write for 10 seconds before the dang tip pops back out.

★★★★★
In theory, this pen should be great for someone with arthritic hands, but I have arthritis in my wrists and this proved to only cause more pain.

★★★★★
It is uncomfortable to have the two arms of the pen between my fingers, especially since each arm is quite wide. The concept isn't natural.

[Previous](#) | [1](#) | [2](#) | [Next](#)

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Customers Who Viewed This Item Also Viewed

[Blue Ergo-Sof PenAgain Pens](#)

[ERGO SOF PENAGAIN PENS BLACK](#)

[Blue Original PenAgain Pens](#)

[ERGOSLEEK METAL PENAGAIN PEN](#)

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