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# **Hidden Persuaders: Do Small Gifts Lubricate Business Negotiations?**

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# Hidden Persuaders: Do Small Gifts Lubricate Business Negotiations?\*

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## Abstract

Gift-giving customs are ubiquitous in social, political, and business life. Legal regulation and industry guidelines for gifts are often based on the assumption that large gifts potentially influence behavior and create conflicts of interest, but small gifts do not. However, scientific evidence on the impact of small gifts on business relationships is scarce. We conducted a natural field experiment in collaboration with sales agents of a multinational consumer products company to study the influence of small gifts on the outcome of business negotiations. We find that small gifts matter. On average, sales representatives generate more than twice as much revenue when they distribute a small gift at the onset of their negotiations. However, we also find that small gifts tend to be counterproductive when purchasing and sales agents meet for the first time, suggesting that the nature of the business relationship crucially affects the profitability of gifts.

**JEL classification:** D63, C93

**Keywords:** reciprocity, gift exchange, field experiment, negotiations

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# 1 Introduction

Gifts are commonly used to cultivate social and economic relationships (Waldfogel 1993; Cialdini 1985; Mauss 1967). For example, the pharmaceutical industry spends billions of dollars every year on gifts for health care professionals (Gagnon and Lexchin 2008; Weintraub 2007; Wazana 2000). These gifts range from travel funding and free lunch to drug samples and penlights (Campbell et al. 2007). Similarly, public officials often receive unsolicited gifts or free food and beverages from lobbyists and special interest groups (Susman 2008). The ethical appropriateness of these practices and their potential to create conflicts of interest is intensively debated, as the lines between gifts and bribes are often not clear-cut (Fisher 2007; Katz et al. 2003; Fain 2002; Rose-Ackerman 1998; McCracken and Callahan 1996). Commonly implemented regulatory practices are so-called *de minimis* rules, which allow the acceptance of gifts up to a certain threshold value. For example, more than half of the US states have implemented a *de minimis* rule for legislators, with thresholds ranging from 10 US dollars per year in Arizona to 500 US dollars in Texas (see NCSL 2014).<sup>1</sup> The implicit assumption behind these policies and guidelines is that while expensive gifts potentially influence behavior, small gifts do not. However, scholars in anthropology and social psychology argue that gifts, irrespective of their value, can impose strong feelings of indebtedness and create an obligation to reciprocate with even larger favors (Cialdini 1985; Mauss 1967; Gouldner 1960). These concerns have led critics to propagate zero gift policies rather than *de minimis* rules (Katz et al. 2003; Fain 2002). Despite its policy relevance, the impact of small gifts on business relationships remains largely unexplored.

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<sup>1</sup>The industry guidelines of the American Medical Association restricts gifts from pharmaceuticals to physicians worth more than 100 US dollar (see Grande 2010).

This paper presents a natural field experiment that tests the impact of small gifts on the outcome of business negotiations.<sup>2</sup> The experiment was conducted in collaboration with a group of sales representatives of a large multinational consumer products company located in Switzerland. The sales agents visited 220 drug stores and pharmacies to sell beauty and health care products and distributed a small gift to a random subset of potential buyers at the beginning of their sales negotiations. The gift consisted of a sample of six tubes of toothpaste costing less than 10 US dollars. This unique setup allows us to provide causal field evidence for reciprocal responses to gift-giving in a business-to-business context. Our null hypothesis is that sales revenues are equal in the two treatments; our alternative hypothesis is that sales revenues are higher in the gift treatment compared to the control treatment.

The results show that even a small gift can have a substantial influence on the success of sales negotiations. The sales representatives generate, on average, more than twice as much revenue when they hand over the toothpaste at the beginning of their sales negotiation. In a post-hoc analysis we use additional information gathered in the field experiment to provide explorative evidence on potential drivers of the observed treatment effect. The treatment effect is particularly pronounced for sales negotiations with store managers: In this case, gifts increase sales revenue by more than 300 percent. Overall, the sales boost is large enough to render gift-giving a profitable strategy for the firm. However, we also find that the impact of gift-giving crucially depends on the nature of the relationship between business partners: When the sales agents negotiate with a potential buyer they meet for the first time, the gift tends to hamper negotiations and reduces revenue.

Our field experiment makes several contributions to the literature. First, a substantial amount of evidence from laboratory experiments documents that reciprocal behavior

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<sup>2</sup>According to Harrison and List's (2004) taxonomy, natural field experiments are studies in which behavior is observed in an environment where subjects naturally make the decisions of interest, and where subjects are typically unaware of the exogenously imposed treatment conditions. List (2011) discusses various methodological challenges of conducting field experiments.

is widespread: People respond to kind or hostile actions likewise, even if reciprocating is costly and yields no future benefits.<sup>3</sup> More recently, an active debate emerged, questioning the extent to which laboratory results are generalizable to naturally occurring market settings (see Al-Ubaydli and List 2015; DellaVigna 2009; Falk and Heckmann 2009; and Levitt and List 2007). In our field experiment, the purchasing agents did not know they were participating in an experiment. Therefore, social desirability effects, which could overstate the importance of prosocial behavior in laboratory settings (Levitt and List 2007), should be absent in our environment. Moreover, the study was integrated into the daily routine of the sales agents and therefore allowed them to behave naturally. In contrast to the usual student subject pool in lab experiments, we analyze the behavior of experienced market participants who are familiar with the commonly used persuasion tactics in the sales business.<sup>4</sup> We thus contribute to the growing literature on gift exchange in the field (e.g., Carpenter 2017; Esteves-Sorenson 2017; Bradler et al. 2016; DellaVigna et al. 2016; Cohn et al. 2015, 2014; Kube et al. 2013, 2012; Bellemare and Shearer 2009; Gneezy and List 2006). Most field experiments focus on monetary gift exchange in the labor market and study whether workers reciprocate higher wages with more effort.<sup>5</sup> Falk (2007) analyzes gift-exchange in a non-market context and finds that enclosing gifts in solicitation letters increases charitable giving. In an audit study conducted in Chinese hospitals, Currie et al. (2013) demonstrate that gifts from patients to physicians reduce the prescription of unnecessary antibiotics and increase service quality, even for third parties associated with the gift giver. List (2006) conducted a field experiment at a sports cards fair and shows that customers who make higher prices

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<sup>3</sup>See Fehr and Gächter (2000) for an overview. A related emerging literature studies bribing and reciprocity in laboratory settings (e.g., Malmendier and Schmidt 2017; Gneezy et al. 2015; Abbink et al. 2002).

<sup>4</sup>See Williams et al. (2004) for evidence that knowledge of persuasive intentions can reduce the susceptibility to persuasion.

<sup>5</sup>Kube et al. (2012) compare monetary and non-monetary gifts and find that non-monetary gifts results in stronger reciprocal reactions than a corresponding cash gift, suggesting that the nature of the gift matters. DellaVigna et al. (2016), however, do not find that workers reciprocate non-monetary gifts with higher productivity. See also Fehr et al. (2009) for a survey on the role of fairness motives in the labor market.

offers receive cards of better quality in return. However, the results also indicate that this relationship holds only when third parties can verify quality. Kirchler and Palan (2018) study the effect of tipping and verbal compliments on service quality in fast food restaurants.<sup>6</sup> In contrast to the previous literature, we experimentally study the impact of gift-giving in a real world business-to-business context. We see our setting as a conservative test for the impact of gift-giving on reciprocal behavior, as the purchasing agents and in particular the store managers should be familiar with the instruments of persuasive marketing tactics.<sup>7</sup>

Second, our results relate to the theoretical literature studying the origins and motives of gift-giving. The prevalence of in-kind gift-giving is puzzling from a standard economic point of view, as cash transfers are in general more efficient than non-monetary gifts, which might be of low or no value to the recipient (see Waldfogel 1993). Several theories propose that in-kind gifts can be used to signal one’s intention to invest in future relationships (Sozou and Seymour 2005; Bolle 2001; Carmichael and MacLeod 1997; Camerer 1988).<sup>8</sup> According to these theories, gifts should be especially effective when used to initiate new business relations. Our results, however, do not support this conjecture. While gifts foster sales in established business relations, they do not generate more revenue in negotiations with prospective customers—if anything, they tend to be counterproductive.

Third, our paper also relates to the common marketing practice of distributing free

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<sup>6</sup>A related literature on survey design studies the effectiveness of noncontingent rewards on mail and telephone survey participation (e.g., Singer et al. 2000). For example, Gneezy and Rey-Biel (2014) find that even very small financial rewards (e.g., 1 US dollar) were able to increase survey response rates, but only when the reward was paid upfront, independent of participation in the survey. However, larger payments (i.e., larger than 15 US dollars) were more effective when they were made contingent on participation.

<sup>7</sup>Wazana (2000) provides a survey of a related literature studying the reactions of physicians to gifts received by the pharmaceutical industry. However, none of those studies exploit experimental or quasi-experimental data. Moreover, in contrast to our setting, most of these studies cannot isolate reciprocal behavior from product familiarization and information effects: Free drug samples or business lunches could also affect future prescription behavior through standard informational channels.

<sup>8</sup>See Ellingsen and Johannesson (2011), Kaplan and Ruffle (2009), and Prendergast and Stole (2001) for further theoretical accounts of non-monetary gift-giving.

samples (see e.g. Cialdini 1985). However, there is astonishingly little evidence on the impact of free product samples on sales (Bawa and Shoemaker 2004). Moreover, the existing literature has mainly focused on product familiarization and learning effects associated with trying product samples.<sup>9</sup> In our experiment, purchasing decisions are made on the spot, leaving the buyer no time to sample the gift. Thus, we depart from the existing marketing literature, by investigating the social aspect of gift-giving rather than its effects on product familiarization.

## 2 Experimental Setting and Design

### Setting

We conducted our field experiment in collaboration with a Swiss subsidiary of a large multinational consumer goods company. More specifically, the experiment involved a group of five sales representatives (three males and two females) who were responsible for beauty and health care products (e.g., shower gels, body lotions, deodorants, etc.). All of them have long work experience in the sales business. They work in different regions, covering the entire Swiss market. The representatives are paid a fixed wage, without any explicit performance incentives.<sup>10</sup> Their main task is to visit and cultivate relationships with the firm’s customers, who are purchasing agents or managers of retail shops, ranging from small independent stores to branches of large retail chains. The field experiment involved a subset of those retail shops, namely drug stores and pharmacies. We study only a subset of the firm’s customers for two reasons: (i) it ensured a sufficiently large number of potential sales negotiations with a relatively homogenous set of stores

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<sup>9</sup>Lammers (1991), Steinberg and Yalch (1978), and Scott (1976) provide field evidence concerning the impact of free samples on purchasing behavior. In one of the rare field experiments focusing on reciprocity in the business to consumer context, Strohmets et al. (2002) find that distributing a small piece of chocolate with the check significantly increased the tips given to the servers in a restaurant.

<sup>10</sup>In communication with the management we learned that the main reason for the absence of performance incentives is to avoid that agents push sales in the short-run at the expense of long-term customer satisfaction and hop from one job to the other in the pursuit of high commissions.

and products, and (ii) the purchasing agents of these stores do not face any restrictions with respect to the receipt of free product samples.

The firm categorizes customers into five different levels of sales potential, ranging from A (highest sales potential) to E (lowest potential). This ranking is based on the firms' prior assessment of the customer (firm size, location, past sales etc.). The rankings are occasionally updated based on the sales agents' feedback, and we observe three instances in which the sales agents requested a change in the category after the negotiation. In order to avoid endogeneity problems we use the original customer category prior to the negotiation in our analysis. The purpose of the ranking is to provide guidance for the sales agents on how much time and effort they should invest in the relationship with a specific customer. We use this ranking in our regression analysis to control for differences in previous buying propensities between stores.

In the design stage of the field experiment, we surveyed the sales representatives about their sales strategies and routines. They regularly visit customers to present new offers and special promotions. The frequency of visits depends on the customer ranking, while the sequence of visits on a given day is determined by geographical proximity. The sales representatives usually drop in without prior notice and try to address the manager of the retail store. In case the manager is busy or absent, they speak to another staff member. The purchasing agents and sales agents often know each other personally, but sales agents occasionally visit prospective customers to enlarge their customer base. Every sales representative is equipped with a folder containing product offers. The majority of the offers are new products or special promotions of existing products. In case a purchasing agent is interested in a product, the sales representatives take the order immediately at the end of the negotiation using the order forms in their sales folder. Sales negotiations typically last ten to fifteen minutes.

We were particularly interested in one aspect of sales strategies, namely their gift-giving practices. All sales representatives had previously used product samples as gifts



in their business negotiations. However, these gifts were used rather infrequently and they were almost always handed over *after* a successful deal. A small independent survey which we conducted with employees and managers ( $n = 32$ ) from different drug stores and pharmacies confirmed this. Except for two respondents, all have received gifts from sales agents in the past, and 90 percent of the respondents indicate that they typically received gifts *after* the sales meeting. In our setting, receiving a gift at the onset of a meeting should therefore come as a surprise to the purchasing agents.

## Experimental Design

Two weeks before the experiment, the sales agents attended a briefing led by one of the authors. We explicitly told the sales agents that their data would not be used for individual performance comparisons and that all data would be anonymized.

After a short introduction, they received detailed instructions about the procedures of the experiment. Each sales agent received a folder containing numbered data sheets for every upcoming sales negotiation. Each sheet contained a text box with the instructions for the corresponding negotiation. In particular, the instructions indicated the treatment condition for the next sales pitch: In the “Gift” treatment, sales agents had to hand over six tubes of toothpaste as a “free sample product from the firm” right at the beginning of their negotiations. The value of the gift was roughly 10 Swiss francs in total (or 7.7 US dollars at the time of the experiment). We chose a gift of similar value to those the sales agents had previously used. In addition, we made sure that the gift is equally attractive to men and women. In the control treatment, the sales agents did not distribute any gift. The sequence of the treatments in each sales agent’s folder was randomly determined in advance and they were instructed to work through the folder sheet by sheet without skipping a sheet or changing the order.<sup>11</sup> During the field experiment, all sellers were equipped with the same sales folders containing five special

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<sup>11</sup>We cross-checked the date and time of each visit with the randomly assigned ordering of sheets and found that the sales agents followed our instructions.

offers.<sup>12</sup> Apart from the treatment manipulation, the sales agents were instructed to follow their usual negotiation routines. We purposely did not restrict their behavior and refrained from using a fixed protocol to keep the situation as natural as possible. The within sales agent randomization allows us to control for differences in negotiation style between the sales agents by controlling for agent fixed effects.<sup>13</sup>

In addition to the instructions, the data sheets also contained a short survey, which provides the data for our analysis. The first part of the survey was filled out before each sales negotiation and asked for (i) the customer category (A, B, C, D, or E), and (ii) whether the customer was being visited for the first time. Immediately after the sales meeting the sales agents filled out the second part of the survey, containing (iii) the number of offers they were able to show to the purchasing agent (as a proxy for attention), (iv) the sales revenue they generated for each of the five offers, (v) the duration of the sales negotiation, and (vi) whether they negotiated with the store manager<sup>14</sup> or another staff member. For a translation of the data sheet see online appendix B. Because the sales agents typically dropped in without prior notice they either negotiated with the store manager, or, if unavailable, with whoever was responsible from the staff. The sales agents took all orders at the end of the negotiation, by letting their negotiation partner fill out and sign an order form. After the meeting the sales agents transferred the completed order forms to the firm to deploy and ship the orders. For our experiment, the sales agents additionally recorded the ordered units and the resulting revenue for each of the five special offers in the data sheet. Our dependent variable is the total revenue generated with the five offers.

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<sup>12</sup>We used several sets of sales folders in order to test various modes of product presentation, which were primarily in the interest of the firm. Treatment Gift and the different forms of product presentation were orthogonal by design.

<sup>13</sup>Given that we had to inform the sales agents about the treatment one might worry that they adjusted their sales effort in response to the gift. We elicited two proxies for sales agents' effort: the duration of the meeting with a customer, and the number of offers that were presented. We find no indication that the sales agents altered their behavior in response to the treatment (see Table A1 in the online appendix).

<sup>14</sup>Given that most of the firms in our sample are single proprietor firms, the store managers typically also own the store.

The last part of the briefing consisted of mock sales negotiations. In order to acquaint the sales agents with the experimental procedures, each of them went through a hypothetical sales negotiation and filled out the data sheet. Every sales agent was identified through a code, which preserved anonymity. The data collection spanned over two months. Customers were only visited once during the experiment. We were able to collect data from a total of 220 sales negotiations; 109 in the Gift treatment and 111 in the control treatment.<sup>15</sup>

### 3 Experimental Results

#### Randomization check and empirical strategy

Table 1 shows the summary statistics for all background variables we elicited. Among the 220 negotiations recorded for this study, sales agents negotiate with a male purchasing agent in 25 percent of the cases, and in 35 percent of the cases they are able to speak to the manager. In 37 percent of the negotiations sales agents do not know the customer from prior visits.

Table 1 also provides the  $p$ -values for differences between the gift and the control treatment.<sup>16</sup> The first two variables refer to the negotiation partner (gender and whether he or she was a manager or member of the regular staff), followed by two variables measuring whether the sales agent has visited the respective customer before, and the number of visits during the previous year. None of these variables are significantly different across treatments. Next we have five dummy variables for the customer category and one variable indicating whether the store is located in a shopping mall. All but one are insignificant. The exception is the dummy variable for “Customer category E”, which

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<sup>15</sup>Due to the additional workload imposed on the sales representatives the firm offered us a limited time window to run the experiment. The number of observations is determined by the number of negotiations with pharmacies and drug stores the sales agents had during that time.

<sup>16</sup>We report two-sided  $p$ -values throughout the text.

Table 1: Descriptive statistics and randomization check

Variable	Total sample $N = 220$		Gift $n = 109$		Control $n = 111$		$p$ -value
	mean	sd	mean	sd	mean	sd	
Male purchasing agent	0.255	0.437	0.284	0.453	0.225	0.420	0.314
Manager	0.350	0.478	0.358	0.482	0.342	0.477	0.810
First visit	0.373	0.485	0.367	0.484	0.378	0.487	0.861
# Visits	1.973	2.532	2.220	2.773	1.730	2.256	0.243
Customer category A	0.055	0.228	0.064	0.246	0.045	0.208	0.531
Customer category B	0.205	0.404	0.229	0.422	0.180	0.386	0.366
Customer category C	0.409	0.493	0.450	0.500	0.369	0.485	0.227
Customer category D	0.059	0.236	0.064	0.246	0.054	0.227	0.749
Customer category E	0.273	0.446	0.193	0.396	0.351	0.480	0.008
Store in shopping mall	0.286	0.453	0.294	0.458	0.279	0.451	0.815
German language region	0.927	0.260	0.927	0.262	0.928	0.260	0.970
Morning (8am-12pm)	0.550	0.499	0.550	0.500	0.550	0.500	0.989
Noon (12pm-2pm)	0.118	0.324	0.156	0.364	0.081	0.274	0.085
Afternoon (2pm-7pm)	0.332	0.472	0.294	0.458	0.369	0.485	0.233
Monday	0.241	0.429	0.239	0.428	0.243	0.431	0.935
Tuesday	0.227	0.420	0.220	0.416	0.234	0.425	0.804
Wednesday	0.114	0.318	0.101	0.303	0.126	0.333	0.556
Thursday	0.150	0.358	0.193	0.396	0.108	0.312	0.079
Friday	0.268	0.444	0.248	0.434	0.288	0.455	0.497
Calendar week 1	0.073	0.260	0.083	0.277	0.063	0.244	0.578
Calendar week 2	0.118	0.324	0.110	0.314	0.126	0.333	0.713
Calendar week 3	0.118	0.324	0.147	0.356	0.090	0.288	0.193
Calendar week 4	0.127	0.334	0.101	0.303	0.153	0.362	0.245
Calendar week 5	0.200	0.401	0.202	0.403	0.198	0.400	0.946
Calendar week 6	0.105	0.307	0.119	0.326	0.090	0.288	0.479
Calendar week 7	0.118	0.324	0.083	0.277	0.153	0.362	0.105
Calendar week 8	0.127	0.334	0.138	0.346	0.117	0.323	0.648
Calendar week 9	0.014	0.116	0.018	0.135	0.009	0.095	0.550
Sunny	0.323	0.469	0.294	0.458	0.351	0.480	0.359
Cloudy	0.564	0.497	0.606	0.491	0.523	0.502	0.215
Rain or snowfall	0.114	0.318	0.101	0.303	0.126	0.333	0.556
Sales rep 1	0.059	0.236	0.064	0.246	0.054	0.227	0.749
Sales rep 2	0.227	0.420	0.229	0.422	0.225	0.420	0.942
Sales rep 3	0.405	0.492	0.376	0.487	0.432	0.498	0.395
Sales rep 4	0.264	0.442	0.284	0.453	0.243	0.431	0.488
Sales rep 5	0.045	0.209	0.046	0.210	0.045	0.208	0.977

This table reports means and standard deviations in the total sample and in treatment Gift and Control. The last column displays  $p$ -values for the null hypothesis of perfect randomization ( $\chi^2$  tests in case of binary variables and Mann-Whitney tests in case of interval variables). “Male purchasing agent” is a gender dummy. “Manager” is a dummy indicating that the sales rep negotiated with the store manager. “First visit” is a dummy indicating that the sales rep visited the purchasing agent for the first time. “# Visits” is the number of times the store has been visited in the previous year. “Customer category” A to E are dummy variables indicating in which category a store falls. “Store in shopping mall” indicates whether the store is located in a shopping mall. “German language region” is a dummy for negotiations in the German Speaking part of Switzerland. “Morning”, “Noon”, and “Afternoon” are dummy variables indicating the time of the day, “Monday” to “Friday” are week day dummies and “Calendar week” 1 to 9 are dummies indicating the week of the year. “Sunny”, “Cloudy”, and “Rain or snowfall” are dummies for self-assessed weather conditions. “Sales agent” 1 to 5 are dummies identifying the different sales agents.

is more frequent in the control treatment than in the Gift treatment.<sup>17</sup> We control for customer category in all regressions. The remaining variables are dummies for time of the day, day of the week, and calendar week, followed by dummies for the sales agents. None of these variables are significantly different across treatment.

We estimate the following linear model using Ordinary Least Squares (OLS):

$$(1) \quad Y_{it} = \alpha_i + \beta Gift_{it} + \gamma X_{it} + \delta T_{it} + \epsilon_{it},$$

where  $Y_{it}$  is either the total sales revenue or a dummy variable indicating strictly positive sales revenue for sales agent  $i$  at time  $t$ .  $Gift_{it}$  is a binary treatment variable. We include individual fixed effects  $\alpha_i$  that capture differences in negotiation style between sales agents. We also include customer category fixed effects ( $X_{it}$ ) in order to control for differences in sales potential between stores. In addition, we control for time of the day, day of the week, and calendar week fixed effects, as well as sales agent specific linear time trends ( $T_{it}$ ). Because our key regressor,  $Gift_{it}$ , is randomly assigned within sales representatives there is no need to cluster standard errors (see Cameron and Miller 2015). Moreover, the sales rep fixed effects  $\alpha_i$  absorb individual specific common shocks.

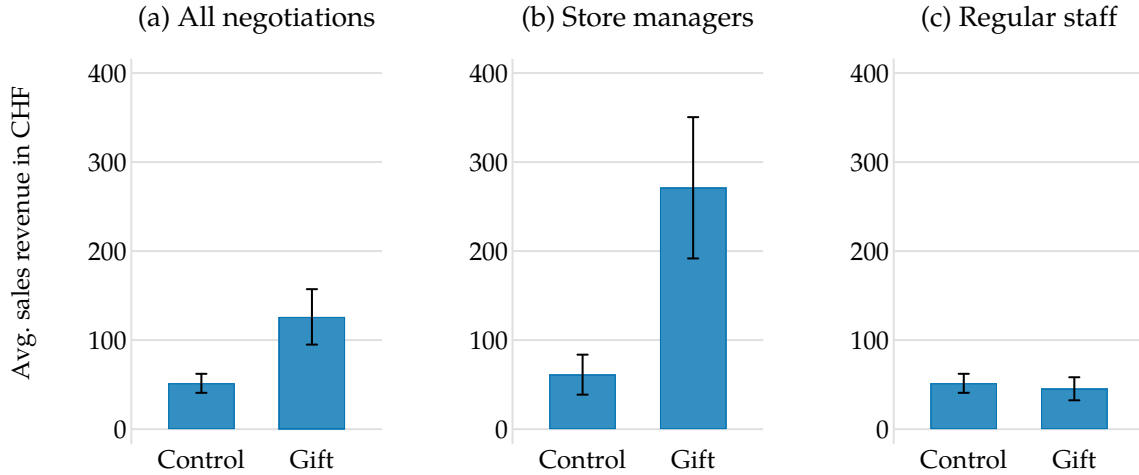
## The influence of gift-giving on sales revenue

Panel (a) of Figure 1 shows that the gift has a substantial positive influence on sales revenue. On average, sales agents more than double their sales revenue when they hand over the gift at the beginning of their negotiations. The regression results reported in Table 3 underpin these findings statistically. Columns (1) and (2) illustrate that treatment Gift significantly increases sales revenue irrespective of whether or not we

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<sup>17</sup>We investigated whether the sales representative deviated from the predetermined order on the data/treatment instruction sheets in their folder, potentially favoring higher category customers for the gift treatment. We cross-checked the consecutively numbered data/treatment instruction sheets with the date and time of each negotiation and found that all sales agents followed the instructions.

Figure 1: Small Gifts Lubricate Sales Negotiations



*Notes.* This figure shows the average sales revenue in treatment Gift and the control condition. Panel (a) is based on the full sample of negotiations ( $N = 220$ ). In panel (b), the sample is restricted to negotiations with the store managers ( $n = 77$ ), and panel (c) is based on the sub-sample of negotiations with the regular staff ( $n = 143$ ). Error bars represent standard error of the mean.

control for customer categories, time of the day, day, week fixed effects and agent specific time trends in addition to the sales agent fixed effects ( $p = 0.019$ , respectively  $p = 0.026$ ). We therefore reject our null hypothesis that gift-giving does not affect sales revenues.

Is the gift a profitable strategy from the perspective of the firm? On average, the gift increases revenue by 58.4 Swiss francs. Whether this renders the gift profitable or not depends on the firm's profit margin. A profit margin as low as 18 percent would suffice to make the gift of ten Swiss francs profitable on average. We do not have exact information about the profit margin, but according to personal communication with employees of the firm, we know that it clearly surpasses this threshold.

In a recent article Maniadis et al. (2014) demonstrate that, depending on the prior, the number of researchers who investigate a specific empirical relationship, as well as biases researchers might have when judging their own work, the risk of false positives can be quite substantial. Given the statistical power of our design, we can calculate to what extent our results should shift our priors about whether gift-giving affects sales

Table 2: Prior and posterior probabilities

$\pi$	Post-study probabilities			
	$k = 1$	$k = 2$	$k = 5$	$k = 10$
0.20	0.76	0.69	0.52	0.38
0.50	0.93	0.90	0.81	0.71
0.80	0.98	0.97	0.95	0.91

Post-study probabilities (PSP) for a low, medium and high prior ( $\pi$ ), and different numbers of researchers  $k$ .

revenues. Using the method proposed by Maniadis et al. (2014), Table 2 shows the post-study probabilities (PSP) for three priors ( $\pi$ ) and different numbers of researchers working on the same question ( $k$ ). The latter parameter decreases PSP as a larger number of researchers independently studying the research question increases the chance of any one study falsely finding a positive result. While we are not aware of other field experimental studies in a business-to-business context, the table shows that for many combinations of a medium or high prior probability ( $\pi$ ) the PSP are above 90 percent.

In the following we make use of additional information collected in the course of this experiment to shed light on the possible drivers of the treatment effect. It is important to note that we did not formulate hypotheses about these variables prior to the experiment. Consequently, the explorative results that follow should be considered as suggestive and need to be corroborated by future research.<sup>18</sup>

Our explorative analysis focuses on two subgroups. First, we distinguish between negotiations with the store managers and other staff members. Managers have potentially more authority to make acquisition decisions than the regular staff. Moreover, regular staff members might not keep the gift for themselves and instead hand it over to their manager. Indeed in our independent survey we find that virtually all respondents in managerial positions use gifts and samples for private purposes, but only 38 percent

<sup>18</sup>List et al. (2016) propose a procedure to correct multiple hypothesis testing. Because we have a large number of potential subgroups to consider (Manager, first visit, customer categories, shopping mall, day of the week, etc.) we do not find significant results for any of the subgroups when correcting for multiple hypothesis testing.

Table 3: Sales revenue

Dependent variable:	(1)	(2)	(3)	(4)	(5)
	Sales revenue in Swiss francs				
Gift	78.939** (33.337)	58.441** (25.968)	-1.545 (23.794)	55.422** (25.313)	-4.614 (24.063)
Gift × manager			175.825** (78.761)		168.636** (76.856)
Manager			39.491 (36.066)		55.974 (37.797)
# Offers shown				12.622 (7.839)	21.828** (8.957)
Constant	21.464 (24.184)	240.664 (153.437)	237.389* (141.207)	184.060 (165.763)	134.966 (147.588)
Controls?					
Agent FE	yes	yes	yes	yes	yes
Agent time trend		yes	yes	yes	yes
Customer category FE		yes	yes	yes	yes
Time of day FE		yes	yes	yes	yes
Day of week FE		yes	yes	yes	yes
Week FE		yes	yes	yes	yes
Observations	220	220	220	220	220
$R^2$	0.061	0.217	0.296	0.221	0.308
$F$	4.549	4.806	3.827	4.532	3.384
$p$	0.001	0.000	0.000	0.000	0.000

This table reports OLS coefficient estimates (robust standard errors in parentheses). The dependent variable is the total sales revenue generated during the negotiation. “Gift” is a dummy variable for treatment Gift. “Manager” is a dummy indicating that the sales rep negotiated with the store manager. The interaction term “Gift × manager” allows the treatment effect to differ between negotiations with the store managers and regular staff. “# Offers shown” indicates how many of the five special offers could be shown to the purchasing agent during the negotiations. All regressions include sales agent fixed effects (FE). Regressions in column (2)–(5) include additional sales agent specific linear time trends and fixed effects for customer categories B to E (as a proxy for sales potential), time of the day, day of the week and calendar week. Significance levels are denoted as follows: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

of the regular staff indicate that they keep gifts themselves. Second, we can distinguish between meetings where the sales agents knew the customer from previous visits or not. This variation is interesting in the light of theories of gift-giving arguing that gift-giving should be especially effective when it comes to establishing a new relationship (Carmichael and MacLeod 1997; Camerer 1988).



## Managers and regular staff

Panel (b) of Figure 1 shows that the treatment effect is very large when the sales agents negotiate with the store managers: sales revenue increase, on average, from 61 to 271 Swiss francs. In contrast, the gift has no impact when the recipients of the gift are regular employees: average sales revenue is 45.3 in treatment Gift and 46.4 Swiss Francs in the control condition (see panel c).

Column (3) of Table 3 illustrates that the effect is mainly driven by the negotiations with the store managers. The coefficient estimate for treatment Gift is close to zero and statistically insignificant ( $p = 0.948$ ), suggesting that the gift does not influence sales revenue when the sales agents negotiate with the regular staff. On the other hand, the interaction effect “Gift  $\times$  manager” is large and significant ( $p = 0.027$ ). Sales revenue increases by roughly 174 Swiss francs, on average, when the sales agents hand over the gift at the beginning of the negotiations with the store managers ( $p = 0.014$ , Wald test). One potential explanation for the different reactions of the managers and regular staff is that managers have more leeway in their purchasing decisions than regular staff. Alternatively, it is also possible that the regular staff members are less likely to keep the gift for themselves and instead hand it over to their managers.<sup>19</sup>

The gift could have boosted sales indirectly by attracting the purchasing agents’ attention. We measure attention by counting how many of the five special offers from the sales booklet the sales agents were able to present to the purchasing agents in a given negotiation. The average number of offers shown is 3.79 in the control treatment and 4.16 in treatment Gift. To investigate the extent to which attention explains the effect of the gift on sales revenue, we include the number of offers shown in column (4) and (5) of Table 3. The coefficient of “# Offers shown” in column (4) is statistically insignificant

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<sup>19</sup>We find the same qualitative pattern when we estimate the effects for each sales agent separately. Table A3 in the online appendix shows that the point estimate for the gift is positive and the interaction “Gift  $\times$  manager” is positive and large for four out of five sales agents. The one agent for whom we do not find a positive effect was newly hired, i.e., visited all customers for the first time. This is consistent with the results on the role of relationships we report below.

( $p = 0.109$ ), but becomes significant in column (5), where we include the interaction term between treatment Gift and meetings with store managers ( $p = 0.016$ ). Nevertheless, the coefficient estimates of “Gift” in column (4) and “Gift  $\times$  manager” in column (5) remain almost unchanged in magnitude and statistical significance. These results suggest that the gift influenced sales performance independent of attention effects.<sup>20</sup>

We further investigate whether the observed increase in sales revenue is due to a higher sales likelihood or whether customers who receive a gift also placed larger orders, i.e., we compare the influence of the gift at the extensive and intensive margin. For this purpose, we estimate a linear probability model according to equation (1) using a dummy variable which indicates strictly positive sales revenue (i.e., sales revenue  $> 0$ ) as dependent variable. Column (1) in Table 4 suggests that overall the gift did not significantly influence the probability of making a deal ( $p = 0.703$ ). However, column (2) illustrates that the gift has a significantly stronger impact on the negotiations with the store managers ( $p = 0.039$ ). On average, the gift increases sales probability in negotiations with store managers by 19.7 percentage points ( $p = 0.058$ , Wald test). In column (3), we measure the impact of the gift on the intensive margin. For this purpose, we restrict the sample to observations with a strictly positive sales revenue. The results show that the treatment Gift has a sizable impact on the intensive margin. Conditional on a deal, the gift increases revenue by approximately 280 Swiss francs ( $p = 0.006$ ). Finally, in column (4) we include the interaction effect “Gift  $\times$  manager” to test whether managers react differently to the gift conditional on a deal. We do not find a significant interaction effect. This is consistent with our interpretation that some of the regular staff members were not permitted to make purchasing decisions. In the restricted sample with strictly positive sales revenue we measure the effect for staff members that had more leeway in their purchasing decisions.

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<sup>20</sup>One of the five special offers consisted of a combination of dental products (one toothpaste and one toothbrush bundled together). We therefore analyzed whether the increase in revenue mostly stems from this complementary special offer. Table A2 in the online appendix shows that, in contrary, our main results are more pronounced for other products than dental products.

Table 4: Extensive and intensive margin

Dependent variable:	(1) Deal (dummy)	(2)	(3) Sales revenue	(4)
Gift	0.023 (0.060)	-0.066 (0.073)	278.728*** (97.106)	230.133* (115.222)
Gift × manager		0.263** (0.126)		-35.285 (253.546)
Manager		0.013 (0.090)		185.186 (133.613)
Constant	0.561** (0.227)	0.568** (0.223)	938.486*** (293.266)	846.934*** (293.160)
Controls?				
Agent FE	yes	yes	yes	yes
Agent time trend	yes	yes	yes	yes
Customer category FE	yes	yes	yes	yes
Time of day FE	yes	yes	yes	yes
Day of week FE	yes	yes	yes	yes
Week FE	yes	yes	yes	yes
Observations	220	220	73	73
$R^2$	0.317	0.350	0.539	0.571
$F$	10.048	11.126	3.190	2.215
$p$	0.000	0.000	0.000	0.009

This table reports OLS coefficient estimates (robust standard errors in parentheses). The dependent variable in columns (1) and (2) is a dummy variable indicating a deal (i.e., sales revenue > 0). In columns (3) and (4), the dependent variable is the total sales revenue generated during the negotiation. “Gift” is a dummy variable for treatment Gift. “Manager” is a dummy indicating that the sales rep negotiated with the store manager. The interaction term “Gift × manager” allows the treatment effect to differ between negotiations with the store managers and regular staff. All regressions include sales agent specific linear time trends and fixed effects for customer categories B to E (as a proxy for sales potential), time of the day, day of the week and calendar week. In column (3), the sample is restricted to observations with a positive revenue. Significance levels are denoted as follows: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## The role of relationships

The sales agents often know their customers personally from previous visits. However, they occasionally negotiate with purchasing agents they have never met before. This allows us to investigate whether the effect of the gift depends on the nature of the relationship between the sales agents and purchasing agents.

Table 5: Regression Results: First visits

Dependent variable:	(1)	(2)	(3)	(4)
	Sales revenue in Swiss francs			
Gift	130.912*** (49.049)	120.576*** (42.677)	49.102 (34.374)	23.063 (35.682)
Gift $\times$ first visit	-146.373*** (49.850)	-150.893*** (54.999)	-107.977** (46.350)	-51.629 (42.877)
First visit	-24.784 (30.686)	-0.077 (43.200)	-1.970 (42.632)	0.164 (42.085)
Gift $\times$ manager			157.850** (76.310)	222.695** (99.505)
Manager			39.691 (35.677)	35.615 (35.060)
Gift $\times$ manager $\times$ first				-218.600** (99.761)
Constant	27.040 (26.578)	159.327 (143.157)	177.801 (135.239)	173.371 (134.336)
Controls?				
Agent FE	yes	yes	yes	yes
Agent time trend		yes	yes	yes
Customer category FE		yes	yes	yes
Time of day FE		yes	yes	yes
Day of week FE		yes	yes	yes
Week FE		yes	yes	yes
Observations	220	220	220	220
$R^2$	0.112	0.246	0.310	0.325
$F$	5.961	3.570	3.168	4.006
$p$	0.000	0.000	0.000	0.000

This table reports OLS coefficient estimates (robust standard errors in parentheses). The dependent variable is the total sales revenue generated during the negotiation. “Gift” is a dummy variable for treatment Gift. “First visit” is a dummy indicating that the sales rep visited the purchasing agent for the first time. “Gift  $\times$  first visit”, “Gift  $\times$  manager”, and “Gift  $\times$  manager  $\times$  first” are the corresponding interaction terms. All regressions include sales agent fixed effects (FE). The regression in column (2) includes additional sales agent specific linear time trends and fixed effects for customer categories B to E (as a proxy for sales potential), time of the day, day of the week and calendar week. Significance levels are denoted as follows: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Interestingly, the gift tends to be counterproductive when customers and sellers meet for the first time ( $N = 82$ ): while the average sales revenue in the control treatment

is 23.5 Swiss francs, it is only half the size in treatment Gift (11.1 Swiss francs). The regression results in columns (1) and (2) of Table 5 provide statistical support for this finding: the coefficient of the “Gift  $\times$  first visit” interaction term is significantly negative, irrespective whether we additionally control for customer categories, time of the day, day and week fixed effects, and agent-specific time trends ( $p < 0.009$ ).<sup>21</sup> Adding up the coefficient estimates for “Gift” and “Gift  $\times$  first visit” yields a negative net treatment effect for negotiations with prospective customers, but the effect does not reach statistical significance ( $p = 0.311$  and  $p = 0.275$ , respectively, Wald tests). In column (3) we additionally include a dummy for negotiations with store manager and the “Gift  $\times$  manager” interaction term, because first time encounters are less frequent for store managers.<sup>22</sup> The results show that the two interaction terms remain statistically significant ( $p = 0.021$  for “Gift  $\times$  first visit” and  $p = 0.040$  for “Gift  $\times$  manager”). Finally, in column (4) we included the three way interaction “Gift  $\times$  manager  $\times$  first visit”. The three way interaction term is significantly negative ( $p = 0.030$ ) and offsets the significantly positive “Gift  $\times$  manager” interaction effect ( $p = 0.026$ ). Overall, these results suggest that the influence of gifts is restricted to negotiations where there is some degree of familiarity between the involved parties.

## 4 Discussion and Concluding Remarks

We conducted a natural field experiment to test whether small gifts lubricate business negotiations. Sales representatives of a multinational consumer products company randomly distributed a small gift to their trading partners at the onset of their negotiations. The small gift substantially increases sales revenue, especially when the gift is handed

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<sup>21</sup>As discussed in Footnote 19 we had one sales agent who was newly hired during the period of the experiment and therefore did not know any of the buyers personally. Our results in Table 5 are robust if we exclude observations from this newly hired employee. See Table A4 in the online appendix for the results.

<sup>22</sup>While 42% of negotiations with the regular staff are first time encounters, among the store managers only 29% are new encounters ( $p = 0.050$ ,  $\chi^2$  test).

over to the store manager. Our study focuses on the immediate effects of a one-time gift. An interesting next step would be to look at the long term effects and repeated gift-giving. For example, it is conceivable that the gift has positive carryover effects on future sales. Once a new product has made it into the product shelf, the store manager is likely to keep it there and place follow up orders. On the other hand, the gift might also have negative carryover effects: If repeated gift-giving creates a norm and gifts are expected, or if the purchasing agents in the Gift treatment decrease their expenditures in subsequent sales negotiations without gifts, the long term effect of the gift might be smaller. Although our data does not allow to test for carryover effects, previous gift-exchange studies suggest that intertemporal substitution is of second order importance (see Kirchler and Palan 2018; Bellemare and Shearer 2009).

Our results also suggest that the influence of gifts on sales negotiations crucially depends on the relationship between business partners. When the sales agents and the customer meet for the first time and therefore do not know each other, gifts do not increase sales on average. On the contrary, they even tend to hinder sales agents' performance. One potential explanation for this phenomenon is that the nature of the relationship determines how recipients perceive gifts and the underlying intentions. When sales agents and purchasing agents know each other, a gift can be seen as a gesture of friendship or a thank you for the good relationship in the past. On the other hand, prospective customers may become suspicious and consider the gift as a persuasive attempt to push sales or even as a bribe. Trawick et al. (1989) conducted a survey among purchasing agents and found that gifts are considered to be less ethical and to negatively affect supplier choice if they are distributed to prospective instead of existing customers. Another possible explanation for the absence of reciprocal behavior relates to the concept of social distance (e.g. Hoffman et al. 1996; Charness et al. 2007). Buyers might perceive the social distance to be greater when dealing with an unknown customer and therefore

feel less indebted to reciprocate.<sup>23</sup>

Our results are consistent with lab experimental evidence of gift-exchange and reciprocity in one-shot situations. However, it is also conceivable that the purchasing agents interpret the situation as a repeated game, and therefore respond to the gift strategically, i.e., they spend more in order to receive additional gifts in the future. In fact, our results that the regular staff and prospective customers—who might be less likely to perceive the situation as a repeated game—do not respond to the gift, appear to be consistent with a strategic form of reciprocity. On the other hand, given the marginal value of the gift in relation to the costs of shelf and storage space, we think it is unlikely that strategic considerations alone would produce such a strong increase in sales revenue.<sup>24</sup>

To conclude, our findings underscore that even small gifts can distort the outcome of sales negotiations. The effect of the gift is surprisingly sizeable given that our setting involves experienced market professionals who themselves use persuasive marketing techniques in their daily business. Furthermore, the managers in our experiment are typically the owner of the business and bear the full consequences of their buying decisions. The effect of the gift could be even larger in more typical bribing situations where people in power receive gifts but the consequences of their actions are borne by third parties. Recent laboratory evidence from Malmendier and Schmidt (2017) indeed suggests that gifts have a stronger effect on behavior if third parties rather than the recipient bear the costs. Therefore, the definition of gifts as bribes and their potential role in shaping conflicts of interest should not be based on the value of gifts alone.

Finally, from a managerial perspective our results highlight the use of controlled field

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<sup>23</sup>Interestingly, Bellemare and Shearer (2009) find that reciprocal behavior is more pronounced in their labor market field experiment, as the workers' tenure increases. It therefore seems that the interaction between the giver-responder relationship and reciprocal motivation is not restricted to the specific setting of this study.

<sup>24</sup>In addition, if purchasing agents respond to the standard practice of gift-giving (handing over gifts *after* a good deal), we should expect a treatment effect opposite to what we observe. In the control treatment, they might be tempted to inflate their orders in expectation of a gift, while there is no immediate reason to do so in the Gift treatment (assuming that they do not expect to get a second gift).

experiments as a tool for evidence-based management (Pfeffer and Sutton, 2006; Anderson and Simester, 2011), allowing practitioners to systematically compare the success of different sales and negotiation techniques.

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