Starting Small and Ending Big – The Effect of Monetary Incentives on Response Rates in the 2003 Survey of Small Business Finances: An Observational Experiment

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Abstract

In 2003, the Survey of Small Business Finances (SSBF), conducted by the Federal Reserve
Board, implemented the use of incentives to increase response rates.   This study examines the
effects of some of the characteristics of the implementation – such as level of effort, time in
queue, and consecutively-increasing incentive amounts – on unit response. Our estimates suggest
that as the number of days increase between the initial screener and main interview, the
probability of completion decreases. Similarly, as the number of days increases between each
consecutive incentive offer the probability of completion decreases. Additional effort, as
measured by additional calls, increases the probability of completion. Finally, each consecutive
offer after the initial offer decreases the probability of completion.

1. Introduction

Obtaining cooperation and participation from potential survey respondents has become increasingly difficult in recent years (e.g., Dennis, 2003). Survey participants are bombarded with questionnaires, telephone surveys, telemarketers, and Internet surveys. Additionally, concerns over privacy and technological developments, such as call screening, have contributed to the difficulty of conducting scientific surveys. As a result, information about the efficacy of techniques to improve response, such as the use of incentives, is of growing import.

Considerable research has been conducted on the use of incentives in consumer and household surveys (see, e.g., Singer and Kulka 2001). Generally, incentives, particularly prepaid monetary incentives, are likely to increase response rates. This finding differs little by mode of administration – mail, telephone, or in-person. However, much less is known about the use of incentives in business surveys.

In 2003, the Survey of Small Business Finances (SSBF), conducted by the Federal Reserve Board, implemented the use of incentives to increase response rates. This study examines the effects of some of the characteristics of the implementation – such as level of effort, time in queue, and consecutively-increasing incentive amounts – on unit response. Specifically, during the screening phase of the 2003 survey, all eligible firms were offered $50 for completing the main interview. As the interviewing progressed, interim response rates were lower than anticipated and an effort was made to increase response rates by increasing the incentives offered to those respondents that had been contacted but had not yet completed the interview.

We model the relationship between unit response and the incentive-offer function, controlling for a variety of firm and calendar differences. Our estimates suggest that as the

number of days increase between the initial screener and main interview, the probability of completion decreases. Similarly, as the number of days increases between each consecutive incentive offer the probability of completion decreases. Additional effort, as measured by additional calls, increases the probability of completion. Finally, each consecutive offer after the initial offer decreases the probability of completion.

In the next section, some background information about the Survey of Small Business Finances is provided, followed by a short literature review of the effect of incentives on response rates. Section 4 includes the 2003 observational experiment and data construction followed by a description of the estimation model and results. The paper concludes with a summary and recommendations.

2. Background

Since 1987, the Survey of Small Business Finances (SSBF) has been conducted approximately every five years. The survey is voluntary and the data are collected using a computer assisted telephone interview, with an average interview length of about 45 minutes.[1] Data collected are financial in nature and sometimes require respondents to consult records. Despite the length and the financial nature of the questions, the 1987 survey achieved a unit response rate of more than 62 percent. In subsequent SSBFs, unit response rates declined. The unit response rate in 1993 was about 52 percent and in 1998 about 33 percent. In each of these surveys, much effort was expended trying to improve response rates, including fine-tuning the questionnaire, hiring interviewers with greater expertise in financial concepts and with greater

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[1] More information on the Federal Reserve's SSBF project can be found on the project website: http://www.federalreserve.gov/pubs/oss/oss3/nssbftoc.htm. The field work for the 2003 survey was conducted by the National Opinion Research Center (NORC) of the University of Chicago between June 2004 and February 2005.

experience with business respondents, revising mail-out materials to make a more compelling case for participation, developing worksheets to aid respondents during the telephone interview, and adjusting interview schedules to permit multiple sessions and accommodating business owners' busy schedules. But the use of incentives was not attempted until the end of the 1998 survey's field period when a nominal pre-interview monetary incentive of $20 was offered to some respondents.[2]

One of the planning goals of the 2003 SSBF was to improve response rates. The major innovation was to offer all respondents a monetary incentive upon completion of the main interview.[3] The initial value of the incentive was $50. As the survey progressed, it became apparent that both precision goals and sample size goals were unlikely to be met with the realized unit response. In order to meet the original survey goals, it was decided to increase the incentive, first to $100, then to $200, and towards the end of the field period to as much as $500.[4] At the conclusion of the survey, incentives and other efforts to increase response rates resulted in an overall response rate of just over 32 percent, which was about the same level as achieved in 1998. It is important to note that this was an observational experiment. The incentive plan was not designed to evaluate the effectiveness of incentives or different incentive levels. The 2003 SSBF incentive program did not contain a zero incentive group and the incentive groups were not mutually exclusive.

3. Literature Review

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[2] See National Opinion Research Center (2001) and Bitler and Wolken (2001).

[3] See section 4 below for additional details on the incentive program.

[4] Although the plan called for offering a $50 incentive to all respondents, some respondents who were not screened until late in the field period received initial incentive offers of $200.

There are of course numerous reasons why individuals decide to participate or not to participate as a respondent to a survey. Incentives (monetary or otherwise) are offered as an inducement by the surveyors to compensate for the relative absence of factors that might otherwise stimulate cooperation or offset those factors that might otherwise reduce cooperation.

Incentives are increasingly used in surveys today. Much of the literature on the effects of incentives has been gathered in regard to mail surveys of consumers or households (Singer and Kulka, 2002). More recently, the literature has examined telephone or in-person surveys of consumers and households. Much less is known about the effect of incentives in business or establishment surveys.[5] In general, incentives raise overall response rates. Kalka emphasized they work as effectively for hard-to-reach respondents (examples include homeless, young males, professional elites, and minorities). The business owner population could be considered a hard-to-reach respondent similar to professional elites (Kalka, 1995). Church (1999), analyzing 38 mail surveys, concludes that prepaid incentives yield higher response rates than promised incentives and promised incentives– that are contingent on completing the survey – do not significantly increase response rates. Also, prepaid monetary incentives yield higher response rates than non-monetary incentives and response rates increase with increasing amounts of money. At some point, ever increasing incentives fail to be effective in raising response rates (James and Bolsein, 1992).

In a study focusing on 39 telephone and face-to-face interviews, Singer, et al (1999) finds similar results. Specifically, incentives improve response rates in telephone and face-to-face interviews and the effects are similar by mode of survey administration. Response rates tend to

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[5] See, e.g., Bitler and Wolken (2001), Gunn and Rhodes (1981), Jobber and Reilly (1998), and White and Luo (2005).

increase with the size of the incentive.   Prepaid incentives tend to generate higher response rates than promised incentives and money is more effective than gifts. Incentives have greater effects on response rates in high-burden surveys than in low-burden surveys although both benefit from incentives. And incentives have a greater effect in surveys where the response rate without an incentive is low.

Much less is known about the use of monetary incentives for businesses or establishments, although what is known is generally consistent with results for consumers and households. Jobber and O'Reilly (1998) found monetary incentives increased response rates in industrial mail surveys. Small up-front payments were more effective than a large promise for completion and non-monetary incentives had a beneficial but smaller effect than monetary incentives. White and Luo (mail surveys to convenience stores) and Gunn and Rhoades (telephone interviews with physicians) also found that prepaid monetary incentives increased response rates. Bitler and Wolken (2001) found that among respondents completing the main interview, those receiving a $20 prepaid incentive in the 1998 SSBF required fewer calls to complete the interview than those not receiving the incentive.

4. Data

As originally designed, when respondents were deemed eligible for the main study after completing the screening interview they were told that they would be given the choice of $50 cash or the Dun and Bradstreet Small Business Solutions package (retailing for $199) for completing the main interview.[6] The sample was intended to be fielded in three batches in order

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[6] At every incentive level, respondents had the opportunity to choose either the cash or the D&B package. In practice, most respondents took the cash incentive, and some that initially opted for the non-cash incentive requested the monetary incentive once they had examined the non-cash incentive. For additional details, see National Opinion Research Center (2005).

to minimize time in queue for each case. In addition, after all cases in each batch had been

attempted a small number of times, the batch was to be subsampled in order to concentrate

efforts on a smaller number of cases. As the interview period progressed, response rates were

lower than had been anticipated. The initial offer for cases screened late in the field period was

increased to $200. In addition, a fourth batch was fielded, which was not subject to subsampling.

Incentives

In an attempt to increase cooperation and boost flagging response rates, the monetary

incentive offered to respondents increased over time. For the most part, the increase in

incentives adhered to the following pattern: (1) Upon completion of the screener, most

respondents were offered $50 (or the D&B package); (2) after several attempts to complete all

cases in the batch were made, batches 1, 2, and 3 were subsampled and cases that were

"subsampled in" were offered $100; (3) batch 4 cases that were sent a refusal conversion letter

were offered $200; (4) all cases from all batches still being fielded as of January 6, 2005 were

offered $200; and (5) all batch 1 – 3 cases still being fielded as of January 19, 2005 were offered

$500.

As a baseline, the "rules" outlined above were applied to all cases, using information

from the sample control file to determine each case's subsampling status. However, due to the

different times at which screening interviews were completed and special interventions by

interviewers and supervisors, not all cases were offered all of the incentives and the timing of

when the differing incentives were offered varied. To appropriately determine whether or not a

given firm was offered a particular incentive and the date on which that incentive was offered,

data were taken from several different sources. NORC provided us with a list of the highest

offer made to each firm and a list of cases that received refusal conversion letters. The call history file provides a complete list of all calls made to each case as well as the disposition for that call. The call text file provides the call notes written by interviewers to document relevant information obtained during the call. It should be noted that not all calls in the call history file produced a companion call note and not all notes in the text file had a companion call. For example, calls to a busy line would produce a call in the call history file with a disposition of "busy," but would generally not generate a call note. On the other hand, supervisory review of a case might produce a note in the call text file instructing the next interviewer to offer the respondent an increased incentive which would not produce an entry in the call history file.

Taken together, the information from these sources allowed us to construct a number of variables for each firm with which a main interview was attempted. First, a series of dummy variables was constructed to indicate whether or not the firm had been offered a particular monetary incentive. Second, a companion dummy was created for all firms that had been offered a particular incentive that indicated whether or not the firm had completed the interview while that offer was in play. Finally, the date that the offer was made to the firm was determined. From this information and the date that the screening interview was completed, we were able to construct the number of calls that were placed and the number of days while a given offer was in play. We could also determine the number of calls made and days that had elapsed prior to the (current) offer being made.

Other Data

In addition to the information on the size of the incentive offered and the timing of that incentive, data from the D&B file and screening interview were also merged onto the final dataset. In the screening interview, information was collected on the firm's size, primary

industry and organizational structure. Additionally, we have information on how difficult it was to complete the screener with the firm that we believe controls for the firm's underlying propensity to complete any survey. This includes the number of calls and days it took to complete the screener and an indicator of whether a proxy completed the screening interview because the owner could not be reached. From the D&B file, we have added the firm's credit score. Additional dummy variables were constructed to capture calendar differences in when the screener was completed

Table 1 provides summary statistics on the variables available for analysis. At first glance, higher incentives appear to be associated with lower response rates. Thirty-five percent of firms completed the interview when offered $50, whereas only 11 percent of firms completed the interview when offered $500. However, it is important to keep in mind that these are not independent samples of firms. All firms that were offered $500 had also been offered a smaller offer previously and failed to complete the interview for the smaller offer, indicating that these firms may be inherently less prone to complete the survey. There is further evidence of this in the amount of effort required to complete the screening interview. Firms that completed the main interview for the $50 incentive required the fewest numbers of calls and fewest days to complete the screener.   Differences in calling protocols are also evident across incentives offered. For the $50 incentive, the average firm had 53 days and 15 call attempts to complete the main interview. For the $500, the average firm had just over five days and 2 calls to complete the interview.

There are little to no observable differences in the Census divisions and urban and rural locations of firms across the different incentives offered. There also seem to be few differences

across firm ownership and industry. There are slight differences in the offers by the size of the firm, with the average firm size growing slightly as the incentives increase.

5. Estimation

We model the likelihood of completing the interview for a certain incentive as a function of the three types of characteristics:

$$(1) \qquad p_i^* = \alpha E_i + \beta F_i + \delta G_i + u_i$$

where p_i^* is a value function correlated with the probability that the firm i will complete the interview, E is a matrix of variables measuring effort put forth (days and calls made), F is a matrix of variables measuring underlying propensity to respond (days and calls necessary to complete the screener and an indicator of a proxy completing the screener), and G is a matrix of variables capturing firm characteristics (location, ownership, and industry) and time and operational differences (batch, screener completion months, and an indicator of the Christmas/New Year holiday).

In practice, we do not observe the *probability* that a given firm will participate, but rather whether or not a given firm *does* participate in the survey.

$$(2) \qquad \begin{aligned} p_i &= 1 \quad if \ p_i^* > 0 \\ p_i &= 0 \quad otherwise \end{aligned}$$

$$(3) \qquad \begin{aligned} \Pr(p_i = 1) &= \Pr\left[u_i > -(\alpha E_i + \beta F_i + \delta G_i)\right] \\ &= 1 - F\left[-(\alpha E_i + \beta F_i + \delta G_i)\right] \end{aligned}$$

where $F(\cdot)$ is the cumulative distribution function of u. Assuming that u_i is normally distributed, we can estimate α, β, and δ using a probit model.

As part of the survey sample design, after a period of attempting to field all cases in a batch, 40 percent of incomplete cases were subsampled out and no further effort was put toward completing these cases.[7] In order to account for this sample design feature, we weighted observations according to the following rules. All cases that were completed prior to subsampling were assigned a weight of one. All cases that were subsampled out were assigned a weight of zero. All cases that were subsampled in were assigned a weight of (1/.6). All batch 4 cases were assigned a weight of one.[8]

Equation (3) was estimated separately with a probit model four times; one for each of the incentive amounts offered. Due to the nature in which the incentives were offered, these models will have a few notable characteristics. First, each model is estimated independently of the others; it is not possible to estimate a nested system because the incentives were not offered sequentially to all firms. For example, many firms were offered $200 without first having been offered $50 or $100. Second, the sample of firms is not identical across models. For example, firms that completed the survey when the $50 incentive was offered were not subsequently offered to the $100 incentive; such firms will be included in the $50 probit, but not the $100, $200, or $500 probits. Finally, while the control variables in each model are similar and aimed at capturing the same effects, they are slightly different across models. To see this more clearly, consider time in queue. When the first offer is made (most often $50), no time has elapsed. Since no firm was offered less than $50, all firms had zero days between the time the screening interview was complete and the first offer was made. The same thing is true of the number of calls; no call attempts were made prior to the first offer. Because there is no variation in these

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[7] Subsampling was only done in batch 1, 2 and 3. Batch 4 cases were all worked until the end of the field period.
[8] The (1/.6) weights adjust for the 40 percent of firms that were subsampled out (60 percent subsampling rate). All estimations were also done using all observations and no weights. The qualitative and quantitative results from these unweighted models are very similar to the one presented in this paper. For brevity, only the weighted estimates will be presented here.

measures, their coefficients cannot be estimated in the $50 model. Similarly, because the incentives offered to a firm only increased over time (no firm was initially offered $500 and then subsequently offered $50), the coefficients for having been offered $100 or $200 cannot be estimated in the $50 model. Conversely, because not all respondents who received the $200 incentive were initially offered $50, the coefficient for the $50 incentive can be estimated in the $200 model.

The coefficients from these estimates are found in Table 2. Across all models, we find that the more time that elapses from the time the incentive is offered ("Days between $xx offer and…"), the less likely it becomes that the firm will complete the interview. Similarly, time elapsed since the screener completion prior to making the current offer ("Days since screener before…") also decreases the likelihood of completion. We also find that the more calls made while a particular offer is in effect ("Calls made between $xx…"), the more likely the firm is to complete the interview. Again, this is a result constant across all incentive sizes. Calls made prior to making the current offer ("Calls made prior to $xx offer") also enter in positively to the probability of completion, although not always significantly. In the models for the $200 and $500 incentives, we also note that having previously offered the respondent a lower incentive ("R offered $xx incentive") decreases the likelihood that the firm will eventually complete the survey, perhaps indicative of a loss in good will from the respondent. Alternatively, this could indicate that these firms are not sensitive to incentives, regardless of their size. Because there is no control group, i.e., no firm was not offered an incentive, we cannot identify whether this was the case.

Other variables enter into the likelihood much as predicted. Variables that indicate that the firm may be inherently more difficult to interview, such as having completed the screening

interview with a proxy and the number of days and calls necessary to complete the screener, generally decrease the likelihood of completion.

Table 3 provides a measure of by how much the likelihood of completion is affected by the effort expended on the case. The results indicate that each day that passes with an offer outstanding diminishes the likelihood of completion by around one percent, with each day that elapsed prior to the current offer being made decreasing the probability by between .1 and .4 percent. They also show that each additional call made while the offer is in play increased the likelihood of completing the interview by between .1 and .7 percent, slightly less than each elapsed day reduced the likelihood in each specification. Each call made prior to the current offer increased the likelihood of completion by .1 percent. Finally, estimates predict a 5 to 7 percent decrease in the likelihood of completion when the firm was offered a lower incentive prior to the current one.

While Table 3 gives a feel for how effective differing measures of effort are on the likelihood of completion, they are only benchmarks for the impact when all variables are measured at their mean and do not provide any information on how this changes as the number of calls and days increase. Figures 1 through 4 look at the predicted probability of completion by the number of days since the incentive was offered. Figure 1 indicates that once the $50 incentive has been available and not taken by a firm for more than 100 days, there is almost no likelihood that the firm will complete the interview, with a very steep drop-off in the likelihood between 50 and 100 days.   Examining the same pictures for $100 and $200 incentives, we see a similar pattern with the drop-off occurring more gradually, but earlier. This difference can likely be attributed to the fact that these are the same respondents who did not complete the interview for smaller incentive offers—there has already been a significant amount of time since

completing the screener. Figure 4 does not look like the previous three figures, with little discernable pattern. Two factors likely account for this difference: the number of observations and the limited number of days over which the incentive was available. The $500 offer was only made in the very last days of fielding in a last-minute effort to increase response rates before coming out of the field. It is likely that a pattern similar to the earlier patterns would have evolved were similar numbers of days elapsed.

Figures 5 through 8 look at the probability of completion by the number of calls since the incentive was offered. These figures have less of a pattern than the previous four, but do indicate that the effectiveness of more calls to reluctant respondents falls; more than 20 calls seem to only marginally affect the likelihood of completion. It is important to keep in mind that calls are a much less precise measure of effort than days. The measure of calls we have counts a busy signal the same way as it does contact with the respondent, although we would definitely not consider them to have the same impact on the respondent's likelihood of participation.

6. Conclusions

The current paper examines data from the incentives experience of the 2003 Survey of Small Business Finances. Because there was no control group of firms who did not receive an incentive offer, we can say little about the effectiveness of the size of the incentive. However, the results do provide some insight into the process of offering incentives. First, the data indicate that the incentives are most effective shortly after they are offered. As the time since the initial offer increases, the likelihood of an eventual completion falls. Furthermore, the time between the initial contact—the completed screener in this case—and the incentive offer also reduces the effectiveness of the incentive. Second, we note that more contacts—calls in this case—increase the likelihood of completion. In other words, the offer in and of itself is not likely to induce the

respondent to cooperate. However, there does seem to be a limit after which more contacts will

not induce higher cooperation. Finally, the 2003 SSBF experience indicates that the size of the

incentive ought to be carefully considered before any offer is made. While offering

progressively higher incentives may be cost minimizing, it may not be the most efficient way to

gain cooperation and achieve high response rates.

Table 1: Characteristic Means by Incentive Offer

	Incentive Offered ($xx)			
Variable	$50	$100	$200	$500
Incentives				
Interview complete for $xx incentive	0.35	0.19	0.13	0.11
Days between $xx offer and next offer/complete/end	53.45	48.89	12.99	5.56
Calls made between $xx offer and next offer/complete/end	15.15	10.17	3.84	2.61
Days since screener before R offered $xx		77.14	89.28	148.70
Calls made prior to $xx offer		21.83	22.78	35.89
R offered $50 incentive		1.00	0.95	1.00
R offered $100 incentive			0.46	0.84
R offered $200 incentive				1.00
Screener Difficulty Measures				
Proxy completed screener	0.31	0.40	0.40	0.43
Calls made to complete screener	7.51	8.95	9.31	9.77
Days to complete screener	16.33	20.17	22.45	22.41
Screener completed Jun/Jul	0.32	0.43	0.17	0.35
Screener completed Aug/Sep	0.29	0.40	0.24	0.41
Screener completed Oct/Nov	0.30	0.17	0.38	0.25
Screener completed Dec/Jan	0.10	0.00	0.21	0.00
$xx incentive in effect b/t Nov 21 - Jan 1	0.44	0.78	0.15	0.00
Location Information				
Urban	0.84	0.86	0.86	0.86
New England	0.06	0.06	0.06	0.06
Middle Atlantic	0.13	0.13	0.14	0.13
East North Central	0.14	0.14	0.14	0.14
West North Central	0.07	0.07	0.06	0.06
South Atlantic	0.18	0.19	0.19	0.21
East South Central	0.05	0.05	0.05	0.05
West South Central	0.11	0.12	0.11	0.12
Mountain	0.08	0.07	0.07	0.07
Pacific	0.17	0.17	0.17	0.17

Table 1—continued

Variable	Incentive Offered ($xx)			
	$50	$100	$200	$500
Organizational Type				
Proprietorship	0.33	0.30	0.31	0.28
Partnership	0.07	0.07	0.07	0.06
Corporation	0.60	0.64	0.63	0.65
Industry				
Construction and mining	0.12	0.14	0.13	0.15
Manufacturing	0.11	0.12	0.12	0.11
Transportation	0.04	0.05	0.05	0.04
Wholesale trade	0.07	0.07	0.07	0.07
Retail trade	0.20	0.20	0.21	0.21
Insurance & real estate	0.06	0.05	0.05	0.05
Business services	0.20	0.20	0.20	0.19
Professional services	0.19	0.17	0.17	0.17
Batch				
Batch 1 case	0.24	0.38	0.14	0.32
Batch 2 case	0.24	0.33	0.18	0.30
Batch 3 case	0.24	0.29	0.22	0.38
Batch 4 case	0.29	0.00	0.46	0.00
Firm Demographics				
D&B credit score	56.34	55.00	55.01	54.49
Total employees	41.03	46.95	45.96	48.74
Observations	9,442	2,164	4,185	1,414

Notes: Observations are weighted to reflect subsampling. Firms that completed prior to subsampling were given a weight of 1; firms subsampled in were given a weight of (1/.6); and firms subsampled out were given a weight of 0.

Table 2: Probit Coefficients

	Incentive Offered ($xx)			
	$50	$100	$200	$500
Effort				
Days between $xx offer and next offer/complete/end	-0.060	-0.060	-0.065	-0.119
	(0.002)***	(0.004)***	(0.004)***	(0.021)***
Calls made between $xx offer and next offer/complete/end	0.023	0.051	0.043	0.078
	(0.003)***	(0.010)***	(0.006)***	(0.019)***
Days since screener before R offered $xx		-0.013	-0.032	-0.018
		(0.004)***	(0.005)***	(0.008)**
Calls made prior to $xx offer		0.002	0.006	0.003
		(0.004)	(0.003)*	(0.003)
R offered $50 incentive			-0.025	
			(0.148)	
R offered $100 incentive			-0.375	-0.387
			(0.113)***	(0.106)***
Participation Propensity				
Proxy completed screener	-0.461	-0.020	-0.336	-0.340
	(0.049)***	(0.093)	(0.067)***	(0.106)***
Calls made to complete screener	-0.017	0.005	-0.012	-0.006
	(0.005)***	(0.009)	(0.007)	(0.010)
Days to complete screener	-0.042	-0.010	-0.026	-0.021
	(0.002)***	(0.005)*	(0.005)***	(0.008)**
Firm Specific Information				
Urban	-0.049	-0.175	0.036	-0.128
	(0.054)	(0.114)	(0.079)	(0.137)
Partnership	-0.176	-0.274	-0.019	-0.014
	(0.095)*	(0.205)	(0.117)	(0.202)
Corporation	-0.006	0.116	-0.092	-0.021
	(0.047)	(0.105)	(0.069)	(0.114)
Manufacturing	0.149	0.093	0.144	0.342
	(0.087)*	(0.168)	(0.123)	(0.207)*
Transportation	0.221	0.502	0.040	0.422
	(0.106)**	(0.230)**	(0.158)	(0.269)
Wholesale trade	0.082	0.145	0.073	0.339
	(0.098)	(0.200)	(0.140)	(0.233)

Table 2—continued

	Incentive Offered ($xx)			
	$50	$100	$200	$500
Retail trade	0.003	-0.110	0.136	0.233
	(0.075)	(0.157)	(0.105)	(0.183)
Insurance & real estate	0.071	0.119	0.089	0.485
	(0.102)	(0.233)	(0.147)	(0.248)**
Business services	0.072	0.169	0.145	0.214
	(0.075)	(0.153)	(0.106)	(0.182)
Professional services	0.134	0.194	0.172	0.451
	(0.077)*	(0.157)	(0.111)	(0.186)**
Screener completed Aug/Sep	-0.026	-0.091	-0.095	0.168
	(0.104)	(0.172)	(0.202)	(0.199)
Screener completed Oct/Nov	-0.366	-0.108	0.141	0.421
	(0.151)**	(0.261)	(0.282)	(0.302)
Screener completed Dec/Jan	-0.143		0.198	-0.766
	(0.203)		(0.350)	(1.137)
$xx incentive in effect b/t Nov 21 - Jan 1	-0.081	0.276	1.093	
	(0.082)	(0.208)	(0.133)***	
Batch 2 case	0.217	-0.516	-1.252	-0.308
	(0.092)**	(0.179)***	(0.249)***	(0.327)
Batch 3 case	-0.012	-2.181	-2.580	-1.516
	(0.137)	(0.294)***	(0.445)***	(0.735)**
Batch 4 case	-1.628		-3.848	-1.304
	(0.185)***		(0.598)***	(1.318)
D&B credit score	0.001	-0.001	0.001	-0.001
	(0.001)**	(0.001)	(0.001)	(0.002)
Total employees	-0.001	0.001	-0.000	-0.001
	(0.000)***	(0.001)*	(0.000)	(0.001)
Constant	3.693	2.497	5.141	3.095
	(0.153)***	(0.483)***	(0.920)***	(1.778)*
Observations	8271	2129	4154	1387

Notes: Observations are weighted to reflect subsampling. Firms that completed prior to subsampling were given a weight of 1; firms subsampled in were given a weight of (1/.6); and firms subsampled out were given a weight of 0. Chi-squares tests for joint significance of Census divisions were insignificant and dropped from final models presented here. Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 3: Probit Marginal Effects for Selected Variables

	Incentive Offered ($xx)			
	$50	$100	$200	$500
Days between $xx offer and next offer/complete/end	-0.019	-0.006	-0.009	-0.018
	(0.001)***	(0.001)***	(0.001)***	(0.003)***
Calls made between $xx offer and next offer/complete/end	0.007	0.005	0.006	0.012
	(0.001)***	(0.001)***	(0.001)***	(0.003)***
Days since screener before R offered $xx		-0.001	-0.004	-0.003
		(0.000)***	(0.001)***	(0.001)**
Calls made prior to $xx offer		0.000	0.001	0.001
		(0.000)	(0.000)**	(0.000)
R offered $50 incentive			-0.003	
			(0.021)	
R offered $100 incentive			-0.050	-0.069
			(0.015)***	(0.022)***
Observations	8,271	2,129	4,154	1,387

Notes: Observations are weighted to reflect subsampling. Firms that completed prior to subsampling were given a weight of 1; firms subsampled in were given a weight of (1/.6); and firms subsampled out were given a weight of 0. Chi-squares tests for joint significance of Census divisions were insignificant and subsequently dropped from final models presented here.   Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. Marginal effects calculated at sample means.

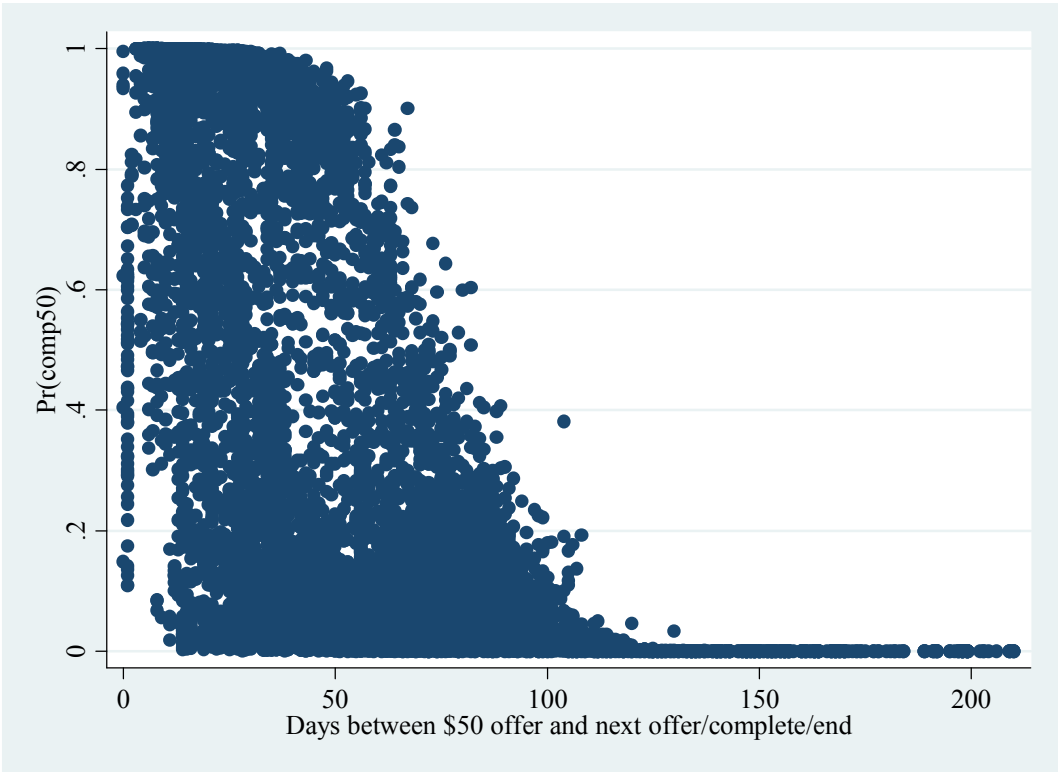Figure 1: Predicted probability of completion for $50 by days since offer

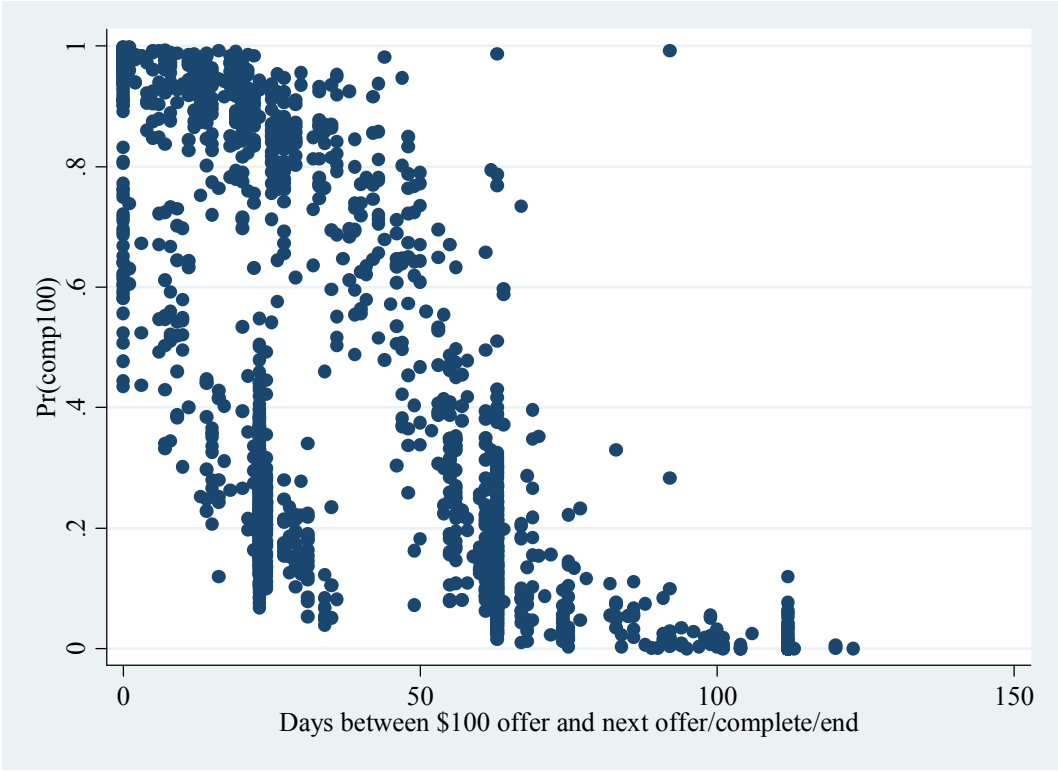Figure 2: Predicted probability of completion for $100 by days since offer

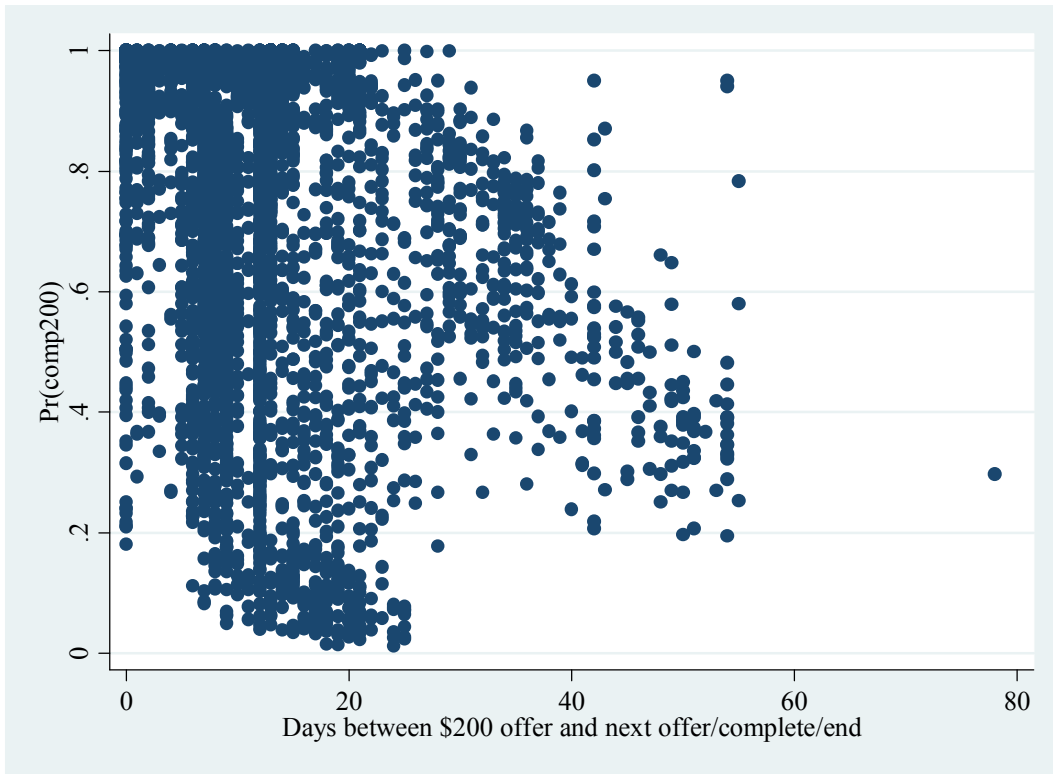Figure 3: Predicted probability of completion for $200 by days since offer

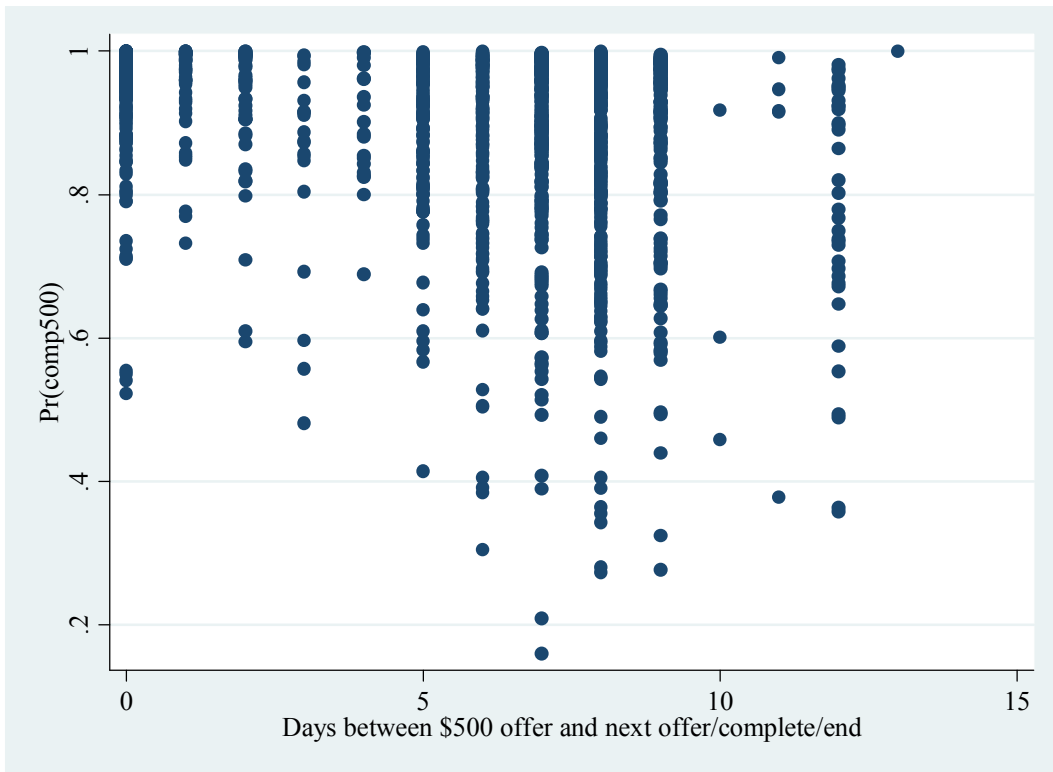Figure 4: Predicted probability of completion for $500 by days since offer

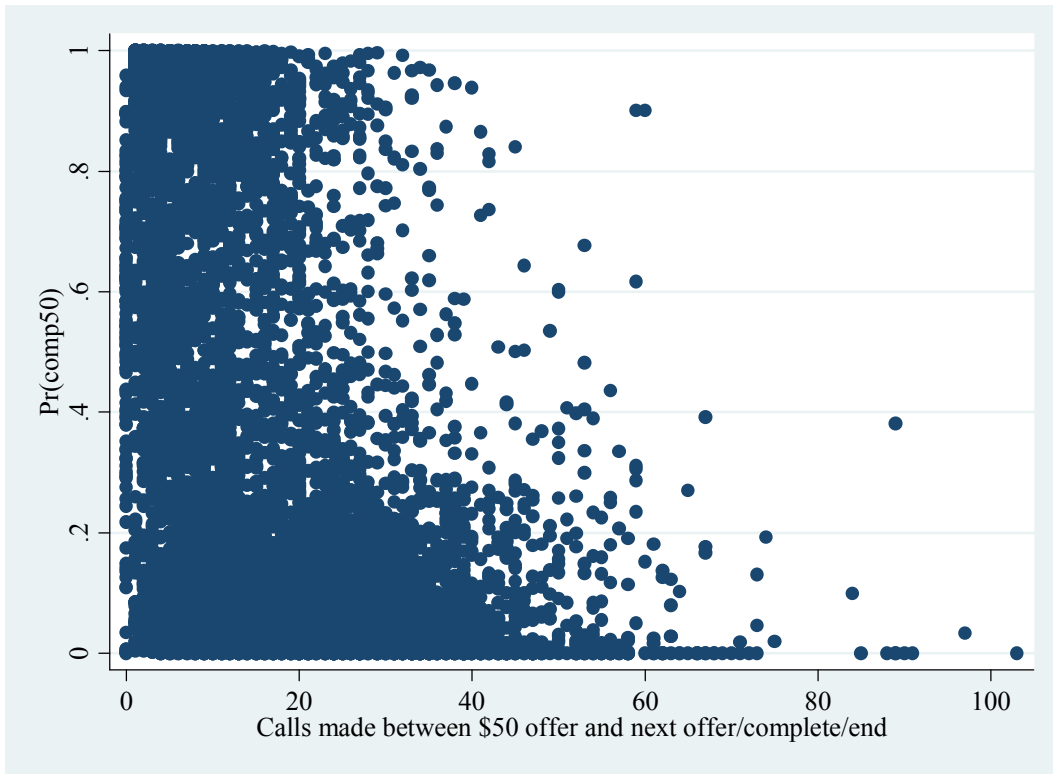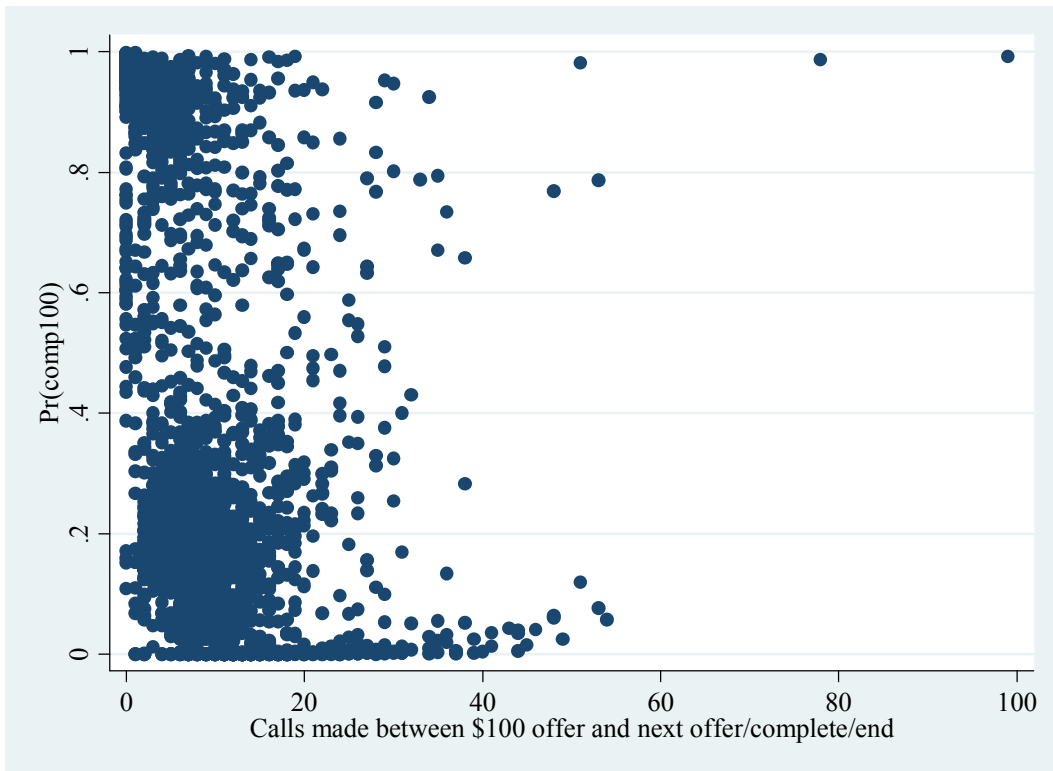Figure 5: Predicted probability of completion for $50 by calls made since offer

Figure 6: Predicted probability of completion for $100 by calls since offer

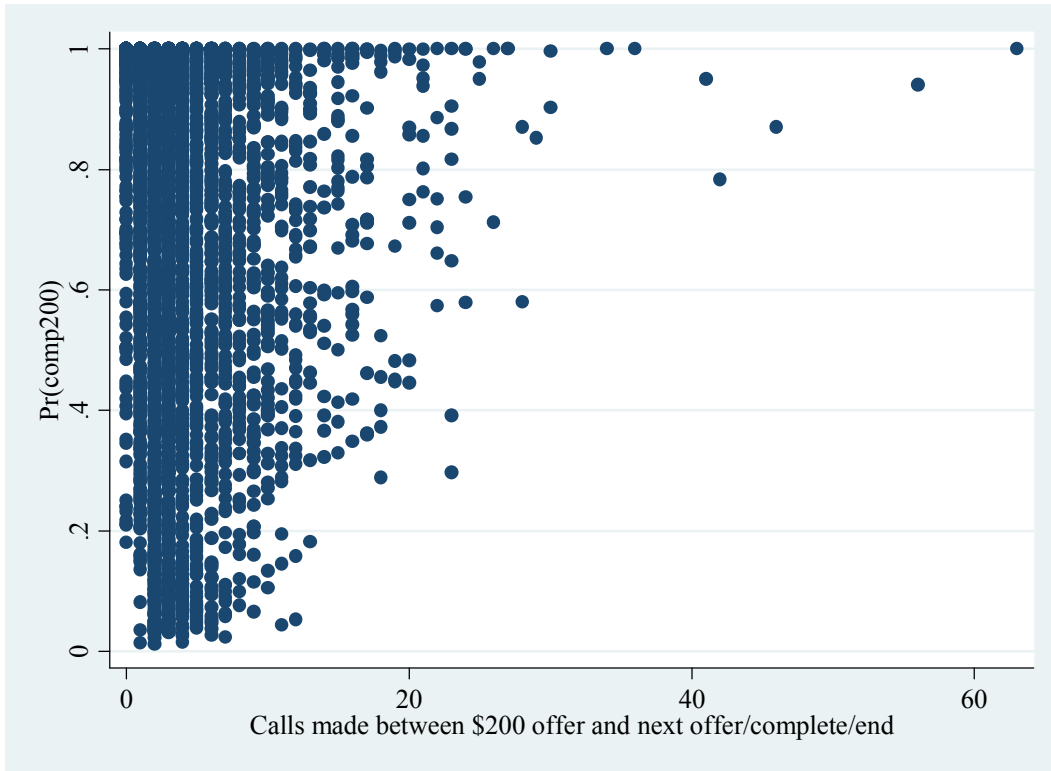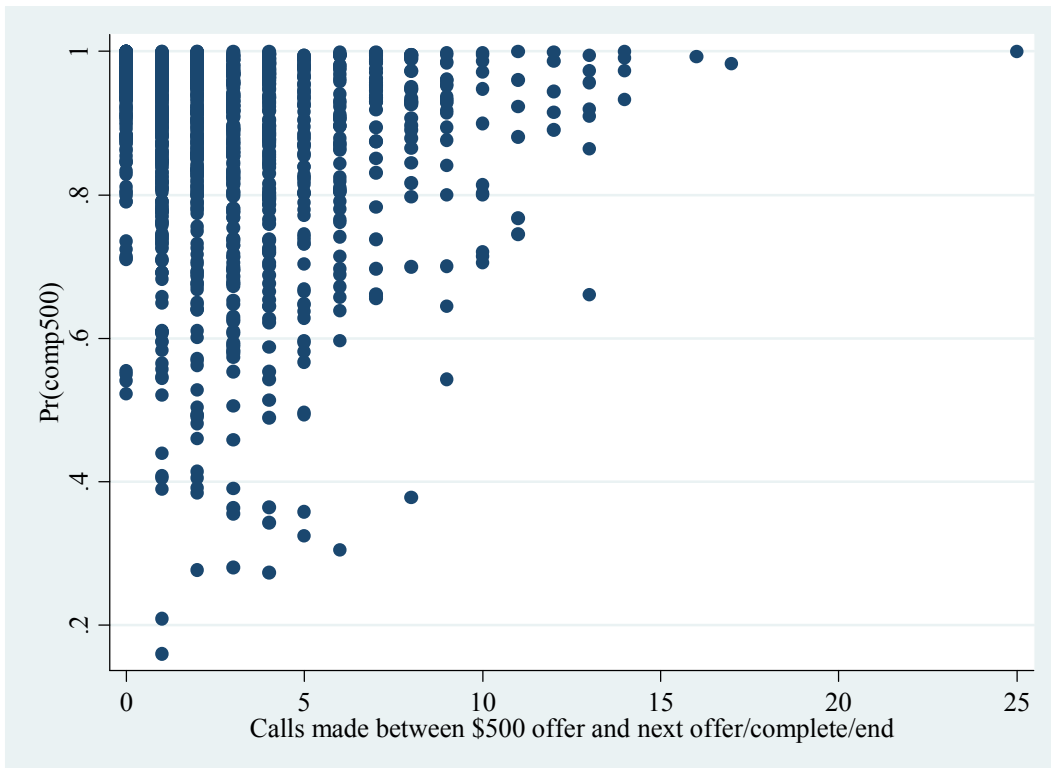Figure 7: Predicted probability of completion for $200 by calls since offer

Figure 8: Predicted probability of completion for $500 by calls since offer

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