

WHAT'S ADVERTISING CONTENT WORTH ?

EVIDENCE FROM A CONSUMER
CREDIT MARKETING FIELD
EXPERIMENT





Introduction

- How does **ADVERTISEMENT** work?
- What's done so far to estimate the effects?
- What's this paper's contribution?



Market Structure



Borrowers' type

Premiums



Regulation and Assessment



The Experiment

Identification
and Power



Sample
Characteristics



Measurement



The Experiment

- Interest Rate Variation
- Deadlines
- Mailer Design:
 - System I Treatment
 - System II Treatment






Mailer Sample

the trusted way
to borrow cash

25 September 2003 Shop 88, Pinetown Arcade
118 Street
Pinetown 3600
Tel: 031 717 8550


031 717 8550
031 717 8550

A special rate for you.

Congratulations! As a valued client, you are now eligible for a special interest rate on your next cash loan from **Shop 88**. This is a limited time offer, so please come in by 31 October 2003.

You can use this cash to buy an appliance, or for anything else you want.

Enjoy low monthly repayments with this offer! For example:

	4 Months	6 Months	12 Months
R500	R149.95	R108.28	R66.62
R1000	R299.90	R216.57	R133.23
R2000	R599.80	R433.13	R266.47
R4000	R1199.60	R866.27	R532.93

LOANS AVAILABLE SUBJECT TO TERMS & CONDITIONS


Loans available in other amounts. There are no hidden costs. What you see is what you pay.

If you borrow elsewhere you will pay R280.14 more in total on a R350.00, 4 month loan.

How to apply:
Bring your ID book and latest payslip to your usual branch, by **31 October 2003** and ask for **Shop 88**.

Names of clients, employees and Lender suppressed to preserve confidentiality.

Customer Consultant
FP&S (Pty) Ltd. If you have already taken a cash loan, we are sorry the offer was not available. You do not qualify for this offer. Consumer loan of 4 months @ interest rate of 20%.





System I Treatment

- Photo



- Choice Option



- Showing interest rate





System II Treatment

- Suggested Use
- Comparison to outside Rate
- Cell phone raffle
- Language affinity
- Blurb



Choice model

- Simple Utility with marginal effect

$$u_i(l) - p_i > 0,$$

- Informative model

$$E_t^u(\mathbf{C}_{it})[u_i(l)] - E_t^p(\mathbf{C}_{it})[p_i] > 0,$$

- Complementary model

$$u_i(l, l^* \mathbf{C}_i) - p_i > 0.$$

- Persuasive model

$$D_i(u_i(l), \mathbf{C}_i) - p_i > 0,$$



Results



Interest rate effect •

• Advertisement effect



Deadline effect •



Interest rate effect

- Elasticity

AS/MH problem •

TABLE III
EFFECTS OF ADVERTISING CONTENT ON BORROWER BEHAVIOR

Dependent variable	Applied for loan before mailer deadline	Applied for loan before mailer deadline	Applied for loan before mailer deadline	Obtained loan before mailer deadline	Loan amount obtained before mailer deadline	Loan in collection status	Borrowed from other lender
Sample	Full	Males	Females	Full	Full	Obtained	Full
Estimator	Probit	Probit	Probit	Probit	OLS	Probit	Probit
Mean (dependent variable)	0.0850	0.0824	0.0879	0.0741	110.4363	0.1207	0.2183
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Monthly interest rate in percentage point units (e.g., 8.2)	-0.0029*** (0.0005)	-0.0025*** (0.0007)	-0.0034*** (0.0008)	-0.0026*** (0.0005)	-4.7712*** (0.8238)	0.0071*** (0.0022)	0.0009 (0.0008)



Advertisement Effect

- AS/MH problem
- Significance
- Effective treatments

Dependent variable	Applied for loan before mailer deadline	Applied for loan before mailer deadline	Applied for loan before mailer deadline
	Full	Males	Females
Sample Mean (dependent variable)	0.0850 (1)	0.0824 (2)	0.0879 (3)
1 = no photo	45	-200	62
1 = female photo (System I: affective response)	197	316	94
1 = photo race matches client's (System I: affinity/similarity)	-193	-56	-291
1 = one example loan shown (System I: avoid choice overload)	234	396	91
1 = interest rate shown (System I: several, potentially offsetting, channels) reason-based choice)	86	-68	215
1 = no specific loan use mentioned (System II: mentioning specific use, via text, triggers deliberation)	203	336	91
1 = loss frame comparison (System II: triggers loss aversion)	-83	-72	-85
1 = we speak "your language" (Lender imposed)	-148	-64	-215



Advertisement Effect

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Sample	Full	Males	Females	Full	Full	Obtained	Full
Estimator	Probit	Probit	Probit	Probit	OLS	Probit	Probit
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Monthly interest rate in percentage point units (e.g., 8.2)	-0.0029*** (0.0005)	-0.0025*** (0.0007)	-0.0034*** (0.0008)	-0.0026*** (0.0005)	-4.7712*** (0.8238)	0.0071*** (0.0022)	0.0009 (0.0008)
1 = no photo	0.0013 (0.0040)	-0.0050 (0.0048)	0.0021 (0.0055)	0.0029 (0.0037)	3.9316 (7.6763)	0.0013 (0.0166)	-0.0024 (0.0060)
1 = female photo (System I: affective response)	0.0057** (0.0026)	0.0079** (0.0034)	0.0032 (0.0038)	0.0056** (0.0024)	8.3292 (5.0897)	-0.0076 (0.0107)	-0.0047 (0.0040)
1 = photo gender matches client's (System I: affinity/similarity)	-0.0026 (0.0026)			-0.0033 (0.0024)	-7.1773 (5.0850)	-0.0059 (0.0107)	0.0041 (0.0040)
1 = photo race matches client's (System I: affinity/similarity)	-0.0056 (0.0048)	-0.0014 (0.0064)	-0.0099 (0.0070)	-0.0035 (0.0044)	9.0638 (10.4079)	0.0181 (0.0176)	-0.0018 (0.0072)
1 = one example loan shown (System I: avoid choice overload)	0.0068** (0.0028)	0.0099*** (0.0038)	0.0031 (0.0040)	0.0075*** (0.0026)	2.4394 (4.8383)	0.0073 (0.0117)	-0.0043 (0.0042)
1 = interest rate shown (System I: several, potentially offsetting, channels)	0.0025 (0.0030)	-0.0017 (0.0042)	0.0073 (0.0044)	0.0043 (0.0028)	2.8879 (6.7231)	0.0140 (0.0123)	0.0007 (0.0049)



Advertisement Effect

Dependent variable	Applied for loan before mailer deadline	Applied for loan before mailer deadline	Applied for loan before mailer deadline	Obtained loan before mailer deadline	Loan amount obtained before mailer deadline	Loan in collection status	Borrowed from other lender
Sample Estimator	Full Probit	Males Probit	Females Probit	Full Probit	Full OLS	Obtained Probit	Full Probit
Mean (dependent variable)	0.0850 (1)	0.0824 (2)	0.0879 (3)	0.0741 (4)	110.4363 (5)	0.1207 (6)	0.2183 (7)
(Pseudo-) <i>r</i> -squared	.0456	.0481	.0438	.0534	.0361	.0674	.0048
<i>p</i> -Value, <i>F</i> -test on all advertising content variables	.0729	.0623	.5354	.0431	.2483	.7485	.4866
Absolute value lower bound of range of joint content effect for which <i>F</i> -test rejects null	0.0010	0.0021		0.0026			
Absolute value upper bound of range of joint content effect for which <i>F</i> -test rejects null	0.0448	0.0388		0.0498			
<i>p</i> -Value, <i>F</i> -test on Lender-imposed content ("low" or "special"; language)	.5064	.8217	.3337	.5254	.1695	.5382	.0785
<i>p</i> -Value, <i>F</i> -test on psychology-motivated content (all other features)	.0522	.0300	.5541	.0286	.3420	.7262	.7583



Advertisement Effect (effectiveness of each type)

Dependent variable	Applied for loan before mailer deadline	Applied for loan before mailer deadline	Applied for loan before mailer deadline	Obtained loan before mailer deadline	Loan amount obtained before mailer deadline	Loan in collection status	Borrowed from other lender
Sample	Full	Males	Females	Full	Full	Obtained	Full
Estimator	Probit	Probit	Probit	Probit	OLS	Probit	Probit
Mean (dependent variable)	0.0850 (1)	0.0824 (2)	0.0879 (3)	0.0741 (4)	110.4363 (5)	0.1207 (6)	0.2183 (7)
Split psychology-motivated content:							
<i>p</i> -Value, <i>F</i> -test on System II (reasoning) content (suggested use, comparison, cell)	.1946	.2643	.6200	.4499	.3399	.9360	.4947
<i>p</i> -Value, <i>F</i> -test on System I (intuitive) content (photo, # loans shown, rate shown)	.0598	.0211	.3929	.0127	.4362	.4346	.7675
<i>p</i> -Value, <i>F</i> -test on System I, dropping rate shown	.0355	.0288	.5130	.0072	.3288	.4196	.7169



Deadline effect

Panel A: Predeadline demand

Dependent variable	Applied before own deadline	Obtained loan before own deadline	Loan amount obtained before own deadline	Loan obtained before own deadline in collection status	Borrowed from other lender	Applied within 2 weeks (short deadline length)
Sample	Full	Full	Full	Obtained	Full	Full
Estimator	Probit	Probit	OLS	Probit	Probit	Probit
Mean (dependent variable)	0.0850	0.0741	110.4363	0.1207	0.2183	0.0360
	(1)	(2)	(3)	(4)	(5)	(6)
Monthly interest rate in percentage point units (e.g., 8.2)	-0.0029*** (0.0005)	-0.0026*** (0.0005)	-4.7768*** (0.8237)	0.0075*** (0.0023)	0.0009 (0.0008)	-0.0009*** (0.0003)
Short deadline, extended	0.0322*** (0.0118)	0.0240** (0.0107)	31.1321* (17.2858)	0.0236 (0.0424)	-0.0104 (0.0131)	-0.0019 (0.0047)
Medium deadline	0.0300*** (0.0068)	0.0270*** (0.0061)	38.0335*** (13.8228)	0.0205 (0.0300)	-0.0065 (0.0119)	-0.0046 (0.0047)
Long deadline	0.0603*** (0.0118)	0.0563*** (0.0112)	70.1119*** (15.0945)	0.0138 (0.0363)	-0.0054 (0.0123)	-0.0055 (0.0042)
(Pseudo-) <i>r</i> -squared	.0461	.0538	.0351	.0597	.0007	.0471
<i>N</i>	53,194	53,194	53,194	3,944	53,194	53,194
<i>F</i> -test of joint significance of all deadlines	0.0000	0.0000	0.0000	0.8487	0.8813	0.6570



Deadline effect

Panel B: Postdeadline applications

Dependent variable = applied	After short deadline	After medium deadline	After long deadline
Sample	Full	Full	Full
Estimator	Probit	Probit	Probit
Mean (dependent variable)	0.1830	0.1477	0.1184
	(1)	(2)	(3)
Offer interest rate	-0.0010 (0.0008)	0.0005 (0.0007)	0.0009 (0.0006)
Short deadline, extended	-0.0224* (0.0117)	-0.0052 (0.0113)	-0.0030 (0.0102)
Medium deadline	-0.0058 (0.0112)	-0.0035 (0.0102)	-0.0047 (0.0092)
Long deadline	-0.0089 (0.0114)	0.0019 (0.0108)	-0.0014 (0.0095)
Pseudo <i>r</i> -squared	.0560	.0448	.0369
<i>N</i>	53,194	53,194	53,194
<i>F</i> -test of joint significance of all deadlines	0.2518	0.6332	0.8262



Conclusions

- The experiment
- Advertisement effectiveness
- Further improvements



Thank you