

——基于微观重疾险数据的实证分析

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。Cutler (2008) , , (Netzer et al. ,2010)、 (Johar et al. ,2012)、 ang t al. ,2008) , 3. , (,2015) 。 , 、 、 、 , 。 Johar (2012) , 。 Bauer (2020) , , Gao (2009) , Soika (2015) , : , ; , Johar (2012) , (,2001; ,2003) 。 (Finkelstein et al. ,2012)、 (Finkelstein,2007;Finkelstein,2008)、 (Card et al. ,2008) 。 (2020) (1), 2018 3 1 APP 19



, Hemenway(1990) Finkelstein (2006)
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RiskAversion_Num

RiskAversion_D

RiskAversion_Type

Claim

2, 1, 0

$$\ln \text{prem}_i = \alpha + \beta_2 \text{treat}_i + \gamma \text{Control}_i + \varepsilon_i \quad (2)$$

2018 年 3 月 1 日至 2018 年 5 月 31 日。

treat_i 为虚拟变量，若 i 属于处理组，则 $\text{treat}_i = 1$ ，否则 $\text{treat}_i = 0$ 。

Control 变量包括：(MinorType)、(MinorTimes)、(MinorProportion)、(MajorType)、(MajorTimes)。

ε_i 为误差项，服从正态分布 $N(0, \sigma^2)$ 。

1% 和 99% 的置信水平下， β_2 的系数在 2018 年 3 月 1 日之后显著为正，说明处理组在 2018 年 3 月 1 日之后，其 $\ln \text{prem}_i$ 显著高于控制组。

	(1)		(1)
VARIABLES	$\ln \text{prem}$	MajorTimes	0.142*** (22.710)
treat	-0.053 (-1.448)	Constant	3.299*** (9.075)
MinorType	-0.009*** (-12.604)		
MinorTimes	0.093*** (19.109)		108063
Minor Proportion	4.678*** (63.476)	R ²	0.921
MajorType	0.005*** (21.905)		

2018 年 3 月 1 日之后，

$$\text{RiskAversion}_i = \alpha + \beta_1 \text{treat}_i + \gamma \text{Control}_i + \varepsilon_i \quad (3)$$

2017 年 12 月 1 日至 2018 年 2 月 28 日。

RiskAversion_i 为虚拟变量，若 i 属于高风险厌恶组，则 $\text{RiskAversion}_i = 1$ ，否则 $\text{RiskAversion}_i = 0$ 。

Control 变量包括：(RiskAversion_Num)、(RiskAversion_Type)。

ε_i 为误差项，服从正态分布 $N(0, \sigma^2)$ 。

β_1 的系数在 2018 年 3 月 1 日之后显著为正，说明处理组在 2018 年 3 月 1 日之后，其 RiskAversion_i 显著高于控制组。

$$\text{RiskAversion}_i = \alpha + \beta_2 \text{ after}_i + \gamma \text{ Control}_i + \varepsilon_i \quad (4)$$

2 2017 12 1 2018 5 31

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0.794, 8.873, 0.794% (Paidmoney) 995
 1 3 treat, , 1, 0 treat
 0.316, 0.465, 31.6%

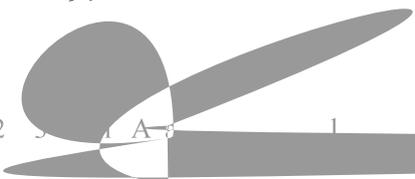
variable				25	50	75	
RiskAversion_Num	1.430	2.523	0	0	0	2	12
RiskAversion_D	0.188	0.391	0	0	0	0	1
RiskAversion_Type	1.177	1.956	0	0	0	2	9
Claim × 100	0.794	8.873	0	0	0	0	100
Paidmoney()	0.995	13.940	0	0	0	0	750
treat	0.316	0.465	0	0	0	1	1
Age	36.678	9.424	18	29	36	44	60
Female	0.476	0.499	0	0	0	1	1
Amnt()	145.756	91.637	5	100	150	200	500
Term	87.955	17.754	1	80	80	106	106
Duration	1109.100	57.700	1004	1046	1126	1156	1185
MinorType	31.192	22.928	0	0	30	60	60
MinorProportion	0.182	0.113	0.000	0.000	0.200	0.300	0.300
MinorTimes	2.249	2.140	0	0	1	5	5
MajorType	91.205	27.791	30	50	110	110	110
MajorTimes	1.072	0.419	1	1	1	1	7

(Age)、(Female)、(Amnt)、
 (Term)、(Province)、(Mi-
 norType)、(MinorProportion)、(MinorTimes)、
 (MajorType)、(MajorTimes)。

(Age) 18 60 , 36.678, 9.424, 25 29 ,
 36 ,75 44 。 47.6% (Amnt) 1
 99 , 14.6 , 9.2 ,
 15 。 (Term) 1 106 , 106 ,
 87.955 。 (Duration) 1109 。 (MinorType) 31.192
 , (MinorProportion) 18.2% , (Mi-
 norTimes) 2.249 , (MajorType) 91.205 , (Major-
 Times) 1.072 。

2 4 2017 12 1 2018 5 31
 , 149024 。 5 。
 2 , RiskAversion_Num 1.572,
 2.484, 1.572 RiskAversion_D
 0.205, 20.5% 2 RiskAver-
 sion_Type 1.314, 1.926, 1.314

4 , (Claim) 100 ,
 0.516, 7.165, 0.516% (Paidmoney) 605 。
 2 4 after, 2018 3 1 2018 5 31



1, 0。 after 0. 489, 0. 500, 48. 9%
 , 2018 3 1 2018 5 31 。
 , (Age)、 (Female)、 (Amnt)、
 (Term)、 (Province)。 18 60 , 34. 090, 8. 312,
 25 28 , 33 ,75 41 。 44. 3% 。
 1 99 , 12. 6 ,
 9. 0 , 12 。 1 106 , 106 ,
 79. 581 。 (Duration) 1146 。

variable				25	50	75	
RiskAversion_Num	1. 572	2. 484	0	0	0	2	12
RiskAversion_D	0. 205	0. 404	0	0	0	1	1
RiskAversion_Type	1. 314	1. 926	0	0	0	2	8
Claim × 100	0. 516	7. 165	0	0	0	0	100
Paidmoney()	0. 605	10. 983	0	0	0	0	1000
after	0. 489	0. 500	0	0	0	1	1
Age	34. 090	8. 312	18	28	33	41	60
Female	0. 443	0. 497	0	0	0	1	1
Amnt()	126. 473	89. 583	5	50	120	160	500
Term	79. 581	14. 950	1	80	80	88	106
Duration	1146. 022	25. 237	1096	1125	1153	1165	1187

1. , Hemenway
 (1990) Finkelstein (2006) , 。
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 3. 672, 1% , 2018 3 (treat = 0) ,
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7, (1), “ ”
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 1% , 2018 3 (after = 0), 2018 3
 (after = 1) 1 , 0.122 ,

VARIABLES	(1)	(2)	(3)	VARIABLES	(1)	(2)	(3)
	Risk_Aversion _Num	Risk_ Aversion_D	Risk_Aversion _Type		Risk_Aversion _Num	Risk_ Aversion_D	Risk_Aversion _Type
treat	3.672 *** (23.099)	0.529 *** (21.318)	2.137 *** (18.267)	MinorProportion	-1.905 *** (-5.224)	0.015 (0.259)	-1.961 *** (-7.034)
Age	-0.012 *** (-14.165)	-0.002 *** (-14.374)	-0.015 *** (-22.471)	MinorTimes	0.330 *** (14.965)	0.052 *** (15.712)	0.156 *** (9.423)
Female	-0.155 *** (-10.940)	-0.020 *** (-9.095)	-0.161 *** (-14.977)	MajorType	-0.016 *** (-14.167)	-0.003 *** (-16.378)	-0.004 *** (-4.417)
lnAmnt	-0.522 *** (-48.140)	-0.092 *** (-49.871)	-0.497 *** (-60.650)	MajorTimes	-0.003 (-0.112)	-0.004 (-1.147)	0.082 *** (4.663)
Term	-0.017 *** (-25.492)	-0.003 *** (-27.123)	-0.003 *** (-6.713)	Constant	10.880 *** (77.739)	1.764 *** (75.458)	8.408 *** (78.593)
MinorType	-0.048 *** (-13.336)	-0.007 *** (-12.069)	-0.034 *** (-12.600)				
				R ²	111401 0.166	111401 0.134	111401 0.199

OLS , 1, t , ***、**、* 1%、5% 10%

VARIABLES	(1)	(2)	(3)	VARIABLES	(1)	(2)	(3)
	Risk_Aversion _Num	Risk_ Aversion_D	Risk_Aversion _Type		Risk_Aversion _Num	Risk_ Aversion_D	Risk_Aversion _Type
after	-0.122 *** (-10.767)	-0.019 *** (-10.020)	-0.079 *** (-9.249)	Term	0.003 *** (6.459)	0.000 *** (3.049)	0.003 *** (8.254)
Age	-0.010 *** (-12.359)	-0.001 *** (-10.335)	-0.009 *** (-14.713)	Constant	7.855 *** (35.438)	1.201 *** (34.468)	6.470 *** (40.734)
Female	-0.191 *** (-16.314)	-0.025 *** (-13.220)	-0.172 *** (-19.282)				
lnAmnt	-0.534 *** (-29.442)	-0.084 *** (-29.432)	-0.441 *** (-33.863)	R ²	149024 0.235	149024 0.175	149024 0.265

4 , (2) (3)

2. , Wilson (1977) Rothschild et al. (1976) , “ ” , 3, 2018 3 , 8 (1) (Claim) , treat -0.003, (2018 3 (treat = 0), (treat = 1) (lnPaidmoney) , treat (2) , 3 , (after = 0), 2018 3 (after = 1) .

VARIABLES	(1) Claim	(2) lnPaidmoney
treat	-0.003 (-0.496)	-0.044 (-0.654)
Age	0.001*** (15.984)	0.006*** (15.802)
Female	0.002*** (3.227)	0.021*** (3.272)
Duration	-0.000 (-0.131)	-0.000 (-0.086)
lnAmnt	-0.000 (-0.033)	0.004 (1.208)
Term	-0.000 (-1.102)	-0.000 (-0.919)
MinorType	0.000 (0.949)	0.002 (1.124)
MinorProportion	0.016 (1.379)	0.157 (1.208)
MinorTimes	-0.000 (-0.011)	-0.001 (-0.152)
MajorType	-0.000 (-0.794)	-0.000 (-0.787)
MajorTimes	-0.000 (-0.080)	-0.004 (-0.367)
Constant	-0.011 (-0.795)	-0.174 (-1.119)
R ²	111401 0.005	111401 0.005

VARIABLES	(1) Claim	(2) lnPaidmoney
after	-0.001* (-1.914)	-0.009** (-2.120)
Age	0.000*** (15.563)	0.005*** (15.383)
Female	0.002*** (5.071)	0.023*** (5.151)
lnAmnt	0.001** (2.400)	0.020*** (3.330)
Term	-0.000 (-1.106)	-0.000 (-0.923)
Duration	-0.000 (-1.618)	-0.000 (-1.583)
Constant	-0.008 (-0.774)	-0.163 (-1.321)
R ²	149024 0.003	149024 0.003

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(Claim) (ln-
,after

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