

Bank Accounts For The Unbanked : Evidence from a Big Bang Experiment:

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Overview

- Financial inclusion
- PMJDY
- Research Questions
- Data
- Specification
- Results
- Conclusions

Why Bank Accounts?

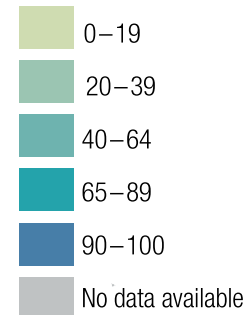
- Safe storage of savings
- Precommit (Dupas and Robinson, 2013; Duflo et al, 2011)
- Insurance substitute (Cole et al, 2013)
- Facilitate payments (although think of M-Pesa)
- Lower “leakage” in government subsidy transfers
- Pathway to other products (Bruhn and Love, 2014)

Reality

MAP 1.1

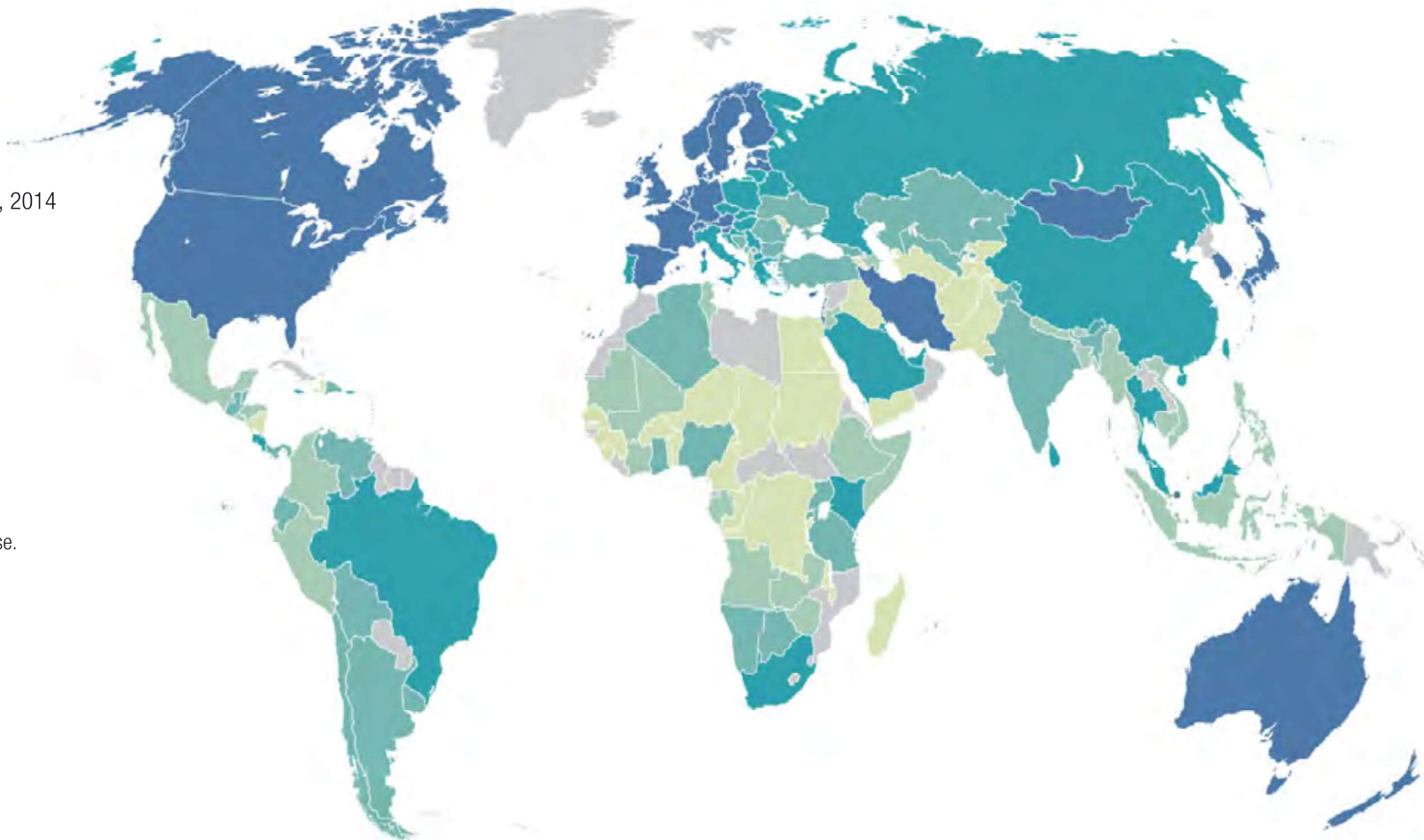
Account penetration around the world

Adults with an account (%), 2014



Source: Global Findex database.

IBRD 41559 | APRIL 2015



Financial Inclusion: Why The Gap?

- 2 billion people unbanked. Why?
- One story: there is no demand for financial services.
 - Trust gap
 - Financial literacy gap
 - But only 4% on unbanked say they don't need an account.
- Alternatively, supply is insufficient or inefficient

Approaches to Inclusion

- Demand side: literacy (Carpena, Cole, Shapiro, Zia, 2011)
 - What to teach? NPV? Risk? Liquidity? (Lusardi, 2008)
 - What is teachable? How? When?
 - What is learnt? Awareness, skills, institutional familiarity?
- Incentives (Cole, Sampson, and Zia, 2011)
- Supply side: branching (Burgess and Pande, 2005)
- Experiential learning?

Our Paper

- We study the largest inclusion experiment in history, PMJDY
- Announced August 15, 2014
- Big bang approach, 100% coverage nearly instantaneously
 - Initial target of 80 mm unbanked in 5 months, easily achieved
 - Over 280 mm accounts, balance = INR 630 billion (\$10 billion)

FinTech and Technology Adoption

- Large literature (Solow, 1956; Romer, 1990)
- Adoption is the major source of productivity gains.
 - Agriculture (Conley and Udry, 2010)
 - Healthcare (Dupas, 2014; Chandra et al, 2016)
 - Soccer ball production (Atkin et al., 2016)
 - Tractors (Manuelli and Seshadri, 2016)
- Little on fin tech adoption? Frame and White (2014)
Everybody talks about weather (FinTech), but nobody does anything about it
- PMJDY has
 - Adoption microdata
 - “FinTech” of sorts for the “bottom of the pyramid”
 - Experiential learning by doing

Hypotheses

- We have a clean supply shock. The response traces the demand curve
- If there is demand, we should see transactional activity. If not, no
 - May be “latent” demand.
 - Global treatment versus small localized treatment in small scale RCTs.
- Our paper, like Agarwal et al., basically reports evidence from this variant of an “RCT.”

Empirical Questions

- Account take up?
- Aging of activity?
- Types of activity?
- PMJDY versus non-PMJDY control sample

Random Sample

- 11 branches of a large state-owned bank
- Accounts opened in the initial phase of the PMJDY program
 - Identify exogenous shock more precisely
- Activity until November 7, 2016. We do not (cannot) extend,
 - Demonetization of 85% of currency on November 8, 2016
 - New shock confounds activity after November 8, 2016
- Non-PMJDY accounts in the same branch
 - Probably endogenously opened due to expected activity
 - But diff-in-diff is then conservative

More Details on Sample

- Content of dataset
 - Transaction date
 - Brief textual description of the transaction
 - Balance before and after transaction
- Audited data, not usage survey used in many RCTs
 - Non-responses or selectivity in responses (Johnson et al., 2006) are not issues.

Types of Transactions

- Baseline d-stats
 - 180,377 transactions by 8,248 PMJDY account holders
 - 104,710 transactions by 2,783 Non-PMJDY account holders
- Classification
 - Active: ATM or cash withdrawals, cash or check deposits.
 - Passive: Bulk transfers by government, interest payments.
 - Active = 41% (PMJDY), 46% (non-PMJDY)

Regression

- y_{ikq} = activity of type k for i up to quarter q , $2 \leq q \leq 8$.
- $\delta_q = 1$ for quarter q , zero otherwise
- $\gamma_i = 1$ for individual i , zero otherwise

$$y_{ikq} = \alpha + \gamma_i + \beta_{k,q} \delta_q + \varepsilon_{ikq}, \quad (1)$$

Implementation

$$y_{ikq} = \alpha + \gamma_i + \beta_{k,q}\delta_q + \varepsilon_{ikq},$$

- Estimate for PMJDY, non-PMJDY, or both with dummy δ_{PMJDY}
- SEs clustered by account and robust to heteroskedasticity
- Is $\beta_{\text{PMJDY},q}$ increasing in q ? Is $\delta_{\text{PMJDY}} > 0$?
- Linear model, Poisson, ZIP for transactions and balances. Control for transfers.

Preview

- # Transactions per account increase with age
- Average account balance increases with age
- PMJDY-Non-PMJDY gap decreases. E.g., # transactions:
 - $q = 1$: PMJDY = 0.81, non-PMJDY = 5.62
 - $q = 8$: PMJDY = 1.21, non-PMJDY = 4.59

Conclusion

- In 2014, India announced the PMJDY program that aimed to supply bank accounts to virtually all its 260 million unbanked
- Using the above program as an economic setting, we report three main findings.
 - While about 30% of PMJDY accounts remain unused, 70% of the accounts migrate out of dormancy into active use
 - Second, activity levels in PMJDY accounts increase over time, a pattern not necessarily seen in non-PMJDY accounts
 - Finally, we find that the active accounts experience significant increases in cash balances. Government direct benefits transfer aids but does not fully explain usage
- Overall, the data indicate that the unbanked learn by doing, and increase usage of accounts for transactions, liquidity management, and increasingly, balance accumulation

Distribution of transactions

Variable		All Accounts	PMJDY Accounts	Non-PMJDY Accounts
Number of Transactions		285,087	180,377	104,710
Classification	Under each classification			
Customer Activity		61.46%	43.07%	72.75%
	ATM	21.89%	18.24%	24.13%
	Cash (Deposit & Withdrawal)	14.29%	16.59%	12.87%
	Transactions through Cheque	9.23%	0.50%	14.60%
	Deposit Transfers	5.36%	3.07%	6.77%
	Withdrawal Transfers	4.38%	1.03%	6.44%
	Point of Sale (POS)	2.97%	1.54%	3.86%
	PMJJBY	0.17%	0.36%	0.05%
	PMSBY	0.41%	0.87%	0.13%
	Salary, Pension, TDS etc.	1.78%	0.90%	2.32%
	TDS	0.16%	0.06%	0.23%
	Insurance (incl ECS)	1.67%	0.13%	2.62%
	NPCI (excl LPG Subsidy)	0.10%	0.24%	0.01%
Charges on Banking Services		5.06%	2.93%	6.36%
	PIN Change or Re-issue	0.03%	0.06%	0.01%
	Maintenance Fees	0.48%	0.01%	0.76%
	Charges (SMS, CDM etc.)	3.68%	1.81%	4.83%
	Inter City Charges for Cheque	0.87%	1.06%	0.76%
Bulk Credit Transactions		12.28%	21.59%	6.57%
	LPG Subsidy	6.23%	12.29%	2.52%
	Other State Government Transfers	6.13%	9.34%	4.16%
Interest Payments		19.17%	30.26%	12.36%
Zero Balance Accounts		0.60%	1.39%	0.12%
Miscellaneous (unexplained)		1.46%	0.75%	1.89%

Number of Transactions by account age in quarters : PMJDY Accounts

Panel A: PMJDY Accounts									
Variable	Age (in Quarters)								Total
	1	2	3	4	5	6	7	8	
Number of Accounts	8,248	8,241	8,232	8,224	8,204	8,121	7,966	7,731	8,248
Classification									
Customer Activity	6,676	9,032	9,696	10,523	9,863	11,005	10,839	9,321	76,955
	0.81	1.10	1.18	1.28	1.20	1.36	1.36	1.21	9.33
	59.72%	41.88%	41.60%	32.73%	43.23%	44.98%	44.45%	45.48%	42.66%
Charges on Banking Services	830	2,851	303	406	408	432	479	374	6,083
	0.10	0.35	0.04	0.05	0.05	0.05	0.06	0.05	0.74
	7.42%	13.22%	1.30%	1.26%	1.79%	1.77%	1.96%	1.82%	3.37%
Bulk Credit Transactions	1,509	4,218	5,341	5,425	5,839	6,093	6,094	4,654	39,173
	0.18	0.51	0.65	0.66	0.71	0.75	0.77	0.60	4.75
	13.50%	19.56%	22.91%	16.87%	25.59%	24.90%	24.99%	22.71%	21.72%
Interest Payments	2,091	5,317	7,825	15,673	6,571	6,784	6,813	5,989	57,063
	0.25	0.65	0.95	1.91	0.80	0.84	0.86	0.77	6.92
	18.70%	24.65%	33.57%	48.74%	28.80%	27.72%	27.94%	29.22%	31.64%

Number of Transactions by account age in quarters : non-PMJDY Accounts

Panel B: non-PMJDY Accounts									
Variable	Age (in Quarters)								Total
	1	2	3	4	5	6	7	8	
Number of Accounts	1,945	1,881	1,837	1,742	1,663	1,480	1,374	1,176	2,783
Classification									
Customer Activity	10,928	9,733	7,959	7,733	7,616	7,053	6,300	5,392	62,714
	5.62	5.17	4.33	4.44	4.58	4.77	4.59	4.59	22.53
	78.58%	73.56%	69.94%	69.22%	71.32%	71.03%	71.07%	72.27%	72.40%
Charges on Banking Services	649	870	916	952	852	877	798	672	6,586
	0.33	0.46	0.50	0.55	0.51	0.59	0.58	0.57	2.37
	4.67%	6.57%	8.05%	8.52%	7.98%	8.83%	9.00%	9.01%	7.60%
Bulk Credit Transactions	554	757	766	829	677	659	544	356	5,142
	0.28	0.40	0.42	0.48	0.41	0.45	0.40	0.30	1.85
	3.98%	5.72%	6.73%	7.42%	6.34%	6.64%	6.14%	4.77%	5.94%
Interest Payments	1,561	1,722	1,586	1,536	1,404	1,207	1,071	901	10,988
	0.80	0.92	0.86	0.88	0.84	0.82	0.78	0.77	3.95
	11.22%	13.01%	13.94%	13.75%	13.15%	12.16%	12.08%	12.08%	12.68%

Regressions Explaining Active Transactions: Part 1

	(1)	(2)	(3)	(4)	(5)	(6)
	PMJDY Accounts			non-PMJDY Accounts		
VARIABLES	All	Govt	No Govt	All	Govt	No Govt
Panel A: Transactions per Account						
Quarter == 2	0.275*** (11.0376) 16,482	0.361*** (10.9435) 8,568	0.195*** (5.264) 7,914	-0.508 (-0.6978) 3,762	-0.821** (-2.2191) 1,508	-0.352 (-0.3266) 2,254
Quarter == 3	0.159*** (5.739) 24,714	0.175*** (5.0074) 12,850	0.147*** (3.5497) 11,864	-1.219*** (-2.8912) 5,599	0.203 (0.6038) 2,254	-2.105*** (-3.2355) 3,345
Quarter == 4	0.161*** (5.0777) 32,938	0.227*** (6.3804) 17,127	0.102** (1.9712) 15,811	-0.810*** (-3.9513) 7,341	0.497* (1.7888) 2,947	-1.625*** (-5.7721) 4,394
Quarter == 5	0.026 (0.8904) 41,142	0.062* (1.6593) 21,398	-0.010 (-0.2254) 19,744	-0.567*** (-3.0213) 9,004	0.653* (1.9552) 3,616	-1.353*** (-6.2035) 5,388
Quarter == 6	0.149*** (4.7363) 49,263	0.270*** (6.8806) 25,600	0.028 (0.5722) 23,663	-0.731** (-2.2448) 10,484	0.722* (1.8046) 4,247	-1.777*** (-3.7222) 6,237
Quarter == 7	0.144*** (4.323) 57,229	0.202*** (4.5413) 29,695	0.085* (1.7078) 27,534	-0.806*** (-2.7358) 11,858	0.408 (0.9984) 4,832	-1.69*** (-4.1296) 7,026
Quarter == 8	-0.016 (-0.5275) 64,960	0.037 (0.8969) 33,679	-0.072 (-1.642) 31,281	-1.157*** (-4.324) 13,034	-0.059 (-0.1227) 5,351	-2.025*** (-7.0873) 7,683

Regressions Explaining Active Transactions: Part 2

	(1)	(2)	(3)	(4)	(5)	(6)
	PMJDY Accounts			non-PMJDY Accounts		
VARIABLES	All	Govt	No Govt	All	Govt	No Govt
Panel B: Value per Account						
Quarter == 2	1135** (2.4384)	1190* (1.8413)	1083 (1.6214)	-13443 (-0.3446)	-18996 (-1.0382)	-10665 (-0.1843)
	16,482	8,568	7,914	3,762	1,508	2,254
Quarter == 3	972*** (2.7094)	602* (1.9006)	1266** (2.1364)	-26084 (-0.798)	84772 (1.3536)	-95139*** (-2.6579)
	24,714	12,850	11,864	5,599	2,254	3,345
Quarter == 4	274 (0.8769)	448 (0.9544)	115 (0.2753)	-19295 (-1.2376)	21220 (0.678)	-44555*** (-2.7653)
	32,938	17,127	15,811	7,341	2,947	4,394
Quarter == 5	905*** (2.7534)	1056** (2.0068)	755* (1.9097)	-24752* (-1.7586)	-6904 (-0.3185)	-36256** (-1.964)
	41,142	21,398	19,744	9,004	3,616	5,388
Quarter == 6	1199*** (4.038)	1095*** (2.9138)	1304*** (2.8323)	-12711 (-0.8299)	49814* (1.6478)	-57756*** (-3.9327)
	49,263	25,600	23,663	10,484	4,247	6,237
Quarter == 7	1275*** (3.8272)	920** (2.0981)	1637*** (3.255)	-32589 (-1.5038)	-56402* (-1.927)	-15124 (-0.4905)
	57,229	29,695	27,534	11,858	4,832	7,026
Quarter == 8	269 (0.6494)	550 (1.0913)	-25 (-0.0374)	-30253* (-1.7823)	-32404 (-1.1221)	-28553 (-1.4207)
	64,960	33,679	31,281	13,034	5,351	7,683

Regressions Explaining Active Transactions: Part 3

	(1)	(2)	(3)	(4)	(5)	(6)
	PMJDY Accounts			non-PMJDY Accounts		
VARIABLES	All	Govt	No Govt	All	Govt	No Govt
Panel C: Value per Transaction						
Quarter == 2	230** (2.2403) 16,482	264 (1.6264) 8,568	197 (1.5456) 7,914	2648 (0.2929) 3,762	-1392 (-0.6444) 1,508	4670 (0.3451) 2,254
Quarter == 3	312*** (2.7067) 24,714	146 (1.5309) 12,850	444** (2.3054) 11,864	-5752 (-1.1502) 5,599	3284 (0.5456) 2,254	-11381 (-1.5804) 3,345
Quarter == 4	109 (1.3874) 32,938	261*** (2.7689) 17,127	-30 (-0.2456) 15,811	-4010* (-1.7865) 7,341	-2232 (-0.8888) 2,947	-5118 (-1.5545) 4,394
Quarter == 5	100 (1.4005) 41,142	158 (1.4891) 21,398	42 (0.4451) 19,744	3587 (0.62) 9,004	1201 (0.433) 3,616	5125 (0.5481) 5,388
Quarter == 6	151** (2.1136) 49,263	103 (1.3824) 25,600	198 (1.6309) 23,663	158 (0.0399) 10,484	8127 (0.8872) 4,247	-5582*** (-3.1946) 6,237
Quarter == 7	116* (1.8126) 57,229	121 (1.4583) 29,695	111 (1.1348) 27,534	-3181 (-1.303) 11,858	-4525 (-1.6053) 4,832	-2195 (-0.5942) 7,026
Quarter == 8	-55 (-0.9009) 64,960	-25 (-0.3291) 33,679	-85 (-0.9075) 31,281	-720 (-0.2474) 13,034	-1697 (-0.4022) 5,351	50 (0.0126) 7,683

Regressions For Combined Sample of PMJDY and non-PMJDY Accounts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	Transactions per Account			Value per Account			Value per Transaction		
Quarter == 2 & PMJDY	0.814 (1.240)	1.173*** (3.946)	0.547 (0.508)	11,759 (0.335)	11,564 (0.789)	11,748 (0.203)	-1,372 (-0.168)	3,250 (1.224)	-4,473 (-0.331)
Quarter == 3 & PMJDY	1.711*** (7.044)	0.561 (1.411)	2.525*** (8.275)	30,714 (1.033)	-72,796 (-1.249)	102,279*** (3.390)	5,275* (1.822)	-837.6 (-0.141)	9,588*** (3.554)
Quarter == 4 & PMJDY	1.793*** (6.642)	0.367 (0.927)	2.751*** (7.600)	32,497 (1.157)	-41,008 (-0.912)	82,679** (2.303)	5,440** (2.116)	3,468 (0.948)	6,793* (1.928)
Quarter == 5 & PMJDY	1.662*** (5.088)	-0.0160 (-0.0332)	2.800*** (6.453)	44,072* (1.789)	-16,919 (-0.693)	86,188** (2.280)	-978.4 (-0.157)	775.4 (0.264)	-2,105 (-0.205)
Quarter == 6 & PMJDY	2.058*** (6.613)	-0.0214 (-0.0414)	3.531*** (9.366)	36,638 (1.244)	-72,548 (-1.632)	115,639*** (3.001)	1,794 (0.337)	-6,123 (-0.597)	7,742 (1.495)
Quarter == 7 & PMJDY	2.290*** (6.950)	0.165 (0.290)	3.808*** (9.943)	58,912** (2.086)	23,577 (0.955)	83,184* (1.849)	5,090 (1.319)	4,975 (1.403)	5,230 (0.861)
Quarter == 8 & PMJDY	2.618*** (7.381)	0.441 (0.691)	4.233*** (11.27)	61,002** (2.292)	9,177 (0.309)	97,345** (2.432)	2,844 (0.718)	2,482 (0.646)	3,118 (0.504)
Observations	78,065	39,045	39,020	78,065	39,045	39,020	78,065	39,045	39,020
R-squared	0.497	0.653	0.431	0.443	0.529	0.381	0.325	0.401	0.307
Controls				Govt. Assisted quarter					
Fixed effects				Account					
Government assisted A/C	All	Yes	No	All	Yes	No	All	Yes	No

Active Deposits

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	PMJDY Accounts			non-PMJDY Accounts		
	Transactions per Account	Value per Account	Value per Transaction	Transactions per Account	Value per Account	Value Transaction
Quarter == 2	-0.027** (-2.0716) 16,482	473* (1.8796) 16,482	322*** (2.7605) 16,482	-1.013*** (-17.2314) 3,762	-16156 (-0.8004) 3,762	7611 (0.4189) 3,762
Quarter == 3	-0.069*** (-6.0024) 24,714	343* (1.8264) 24,714	266** (2.0846) 24,714	-0.440*** (-8.0503) 5,599	-26285* (-1.8311) 5,599	-16236 (-1.601) 5,599
Quarter == 4	-0.114*** (-11.4783) 32,938	-56 (-0.3407) 32,938	35 (0.3827) 32,938	-0.308*** (-6.3198) 7,341	-12650* (-1.7037) 7,341	-5023 (-1.5269) 7,341
Quarter == 5	-0.070*** (-7.2475) 41,142	546*** (3.0019) 41,142	233** (2.1639) 41,142	-0.287*** (-6.0872) 9,004	-10143 (-1.2044) 9,004	-2606 (-0.3935) 9,004
Quarter == 6	-0.0006 (-.0591) 49,263	643*** (3.9601) 49,263	279** (2.3975) 49,263	-1.154*** (-2.6917) 10,484	-8612 (-1.1711) 10,484	-4799 (-1.1314) 10,484
Quarter == 7	-0.045*** (-4.5135) 57,229	413** (2.4594) 57,229	148 (1.4178) 57,229	-0.315*** (-5.4159) 11,858	-16521 (-1.5137) 11,858	-7886* (-1.9572) 11,858
Quarter == 8	-0.087*** (-9.25) 64,960	76 (0.3596) 64,960	-41 (-.4556) 64,960	-0.399*** (-5.5122) 13,034	-18409** (-2.1978) 13,034	-5158 (-1.3333) 13,034

Active Withdrawals

	(1)	(2)	(3)	(4)	(5)	(6)
	PMJDY Accounts			non-PMJDY Accounts		
VARIABLES	Transactions per Account	Value per Account	Value per Transaction	Transactions per Account	Value per Account	Value Transaction
Quarter == 2	0.303*** (17.8218) 16,482	662*** (2.9488) 16,482	194* (1.7132) 16,482	0.505 (0.7043) 3,762	2712 (0.1385) 3,762	1740 (0.2856) 3,762
Quarter == 3	0.229*** (10.9152) 24,714	628*** (3.3976) 24,714	216* (1.9417) 24,714	-0.780* (-1.9338) 5,599	201 (0.0091) 5,599	-2618 (-0.7038) 5,599
Quarter == 4	0.275*** (10.8484) 32,938	330** (2.08) 32,938	58 (0.8583) 32,938	-0.501*** (-2.7676) 7,341	-6645 (-0.7059) 7,341	-3217* (-1.7676) 7,341
Quarter == 5	0.096*** (4.2343) 41,142	359** (2.2274) 41,142	32 (0.4802) 41,142	-0.279* (-1.7756) 9,004	-14608* (-1.8887) 9,004	-149 (-0.0857) 9,004
Quarter == 6	0.150*** (5.9863) 49,263	556*** (3.4173) 49,263	124* (1.9415) 49,263	-0.576* (-1.9183) 10,484	-4098 (-0.4426) 10,484	2291 (0.386) 10,484
Quarter == 7	0.189*** (7.0411) 57,229	862*** (4.6526) 57,229	161** (2.4732) 57,229	-0.491* (-1.8294) 11,858	-16067 (-1.4177) 11,858	-2250 (-0.971) 11,858
Quarter == 8	0.072*** (2.963) 64,960	193 (0.9178) 64,960	-73 (-1.4347) 64,960	-0.757*** (-3.3695) 13,034	-11843 (-1.3186) 13,034	116 (0.0395) 13,034

Active Deposits and Withdrawals: PMJDY and non-PMJDY Accounts

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Active Deposits			Active Withdrawals		
	Transactions per Account	Value per Account	Value per Transaction	Transactions per Account	Value per Account	Value per Transaction
Quarter == 2 & PMJDY	0.970*** (16.91)	15,162 (0.836)	-6,285 (-0.385)	-0.155 (-0.241)	-3,403 (-0.192)	-981.8 (-0.177)
Quarter == 3 & PMJDY	0.865*** (12.38)	33,605** (2.476)	12,985** (2.050)	0.847*** (4.254)	-2,891 (-0.143)	2,124 (0.801)
Quarter == 4 & PMJDY	0.812*** (10.87)	29,130** (2.076)	7,518 (0.896)	0.982*** (4.364)	3,367 (0.203)	3,432* (1.651)
Quarter == 5 & PMJDY	0.880*** (11.20)	31,003** (2.153)	6,719 (0.668)	0.783*** (2.793)	13,069 (1.138)	1,211 (0.493)
Quarter == 6 & PMJDY	0.852*** (9.664)	31,286** (2.076)	9,550 (1.028)	1.206*** (4.766)	5,353 (0.318)	-1,057 (-0.161)
Quarter == 7 & PMJDY	0.995*** (10.73)	40,359*** (2.644)	13,328 (1.450)	1.296*** (4.873)	18,554 (1.357)	3,161 (1.080)
Quarter == 8 & PMJDY	1.071*** (9.898)	44,176*** (3.139)	11,361 (1.223)	1.548*** (5.602)	16,826 (1.191)	931.6 (0.291)
Observations	78,065	78,065	78,065	78,065	78,065	78,065
R-squared	0.568	0.413	0.391	0.459	0.472	0.327
Controls			Govt Assisted Quarter			
Fixed Effects			Account			
Govt Assisted A/C			All			

ATM and Branch Transactions: Part 1

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	PMJDY Accounts			non-PMJDY Accounts		
	Transactions per Account	Value per Account	Value per Transaction	Transactions per Account	Value per Account	Value per Transaction
Panel A: ATM						
Quarter == 2	0.249*** (16.443) 16,482	462*** (9.26) 16,482	121*** (9.2294) 16,482	-0.241*** (-2.0922) 3,762	-1012 (-1.3526) 3,762	-24 (-.3863) 3,762
Quarter == 3	0.412*** (9.097) 24,714	413*** (7.265) 24,714	105*** (7.9775) 24,714	-0.258** (-2.3414) 5,599	-520 (-.7987) 5,599	-111** (-2.1933) 5,599
Quarter == 4	0.143*** (7.6389) 32,938	304*** (5.5506) 32,938	68*** (5.5319) 32,938	-0.269*** (-2.6382) 7,341	-271 (-.4743) 7,341	-94* (-1.7537) 7,341
Quarter == 5	0.104*** (5.0547) 41,142	368*** (5.3238) 41,142	53*** (3.9563) 41,142	-0.152 (-1.3799) 9,004	-455 (-.9163) 9,004	-151*** (-3.094) 9,004
Quarter == 6	0.136*** (6.095) 49,263	421*** (4.9164) 49,263	57*** (4.2843) 49,263	-0.303*** (-2.6405) 10,484	-459 (-.8106) 10,484	-178*** (-3.4057) 10,484
Quarter == 7	0.133*** (5.7189) 57,229	552*** (6.1037) 57,229	55*** (4.2566) 57,229	-0.3777*** (-3.1571) 11,858	-109 (-.1593) 11,858	-195*** (-3.7991) 11,858
Quarter == 8	0.0072 (.337) 64,960	148** (2.0247) 64,960	13 (1.0404) 64,960	-0.532*** (-3.6866) 13,034	-1512** (-2.0837) 13,034	-237*** (-3.9393) 13,034

ATM and Branch Transactions: Part 2

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	PMJDY Accounts			non-PMJDY Accounts		
	Transactions per Account	Value per Account	Value per Transaction	Transactions per Account	Value per Account	Value per Transaction
Panel B: Cash (Deposit & Withdrawal)						
Quarter == 2	-0.018 (-1.3787)	557*** (2.6609)	424*** (3.6649)	-0.794*** (-15.1412)	-9144 (-1.418)	-1198 (-.7375)
	16,482	16,482	16,482	3,762	3,762	3,762
Quarter == 3	-0.059*** (-5.0236)	391** (2.2384)	288** (2.3831)	-0.457*** (-10.7276)	-7825** (-2.3146)	-1415 (-1.2088)
	24,714	24,714	24,714	5,599	5,599	5,599
Quarter == 4	-0.053*** (-4.9503)	-39 (-.2778)	-43 (-.4886)	-0.343*** (-8.411)	-6814*** (-2.7503)	-2564*** (-3.7569)
	32,938	32,938	32,938	7,341	7,341	7,341
Quarter == 5	-0.087*** (-9.06)	208 (1.3954)	39 (.5198)	-0.306*** (-7.9979)	-1642 (-.4813)	1603 (.6883)
	41,142	41,142	41,142	9,004	9,004	9,004
Quarter == 6	-0.049*** (-5.0698)	487*** (2.8891)	197** (2.5074)	-0.243*** (-5.5819)	-3569 (-1.3804)	-1600 (-1.5084)
	49,263	49,263	49,263	10,484	10,484	10,484
Quarter == 7	-0.054*** (-5.5886)	224 (1.2577)	161* (1.6967)	-0.274*** (-6.9833)	-2934 (-1.2809)	-1678* (-1.85)
	57,229	57,229	57,229	11,858	11,858	11,858
Quarter == 8	-0.106*** (-11.2963)	-263* (-1.8241)	-88 (-1.1204)	-0.292*** (-5.5736)	-651 (-.2505)	-73 (-.055)
	64,960	64,960	64,960	13,034	13,034	13,034

Account Balances

	(1)	(2)	(3)	(4)	(5)	(6)
	PMJDY Accounts			non-PMJDY Accounts		
VARIABLES	ALL	Govt	No Govt	ALL	Govt	No Govt
Quarter == 2	0.206*** (7.2879) 6,882	0.402*** (9.859) 3,602	0.062 (1.5992) 3,280	-0.165*** (-3.8786) 3,436	0.048 (.5925) 1,388	-0.271*** (-5.5342) 2,048
Quarter == 3	0.082*** (4.0135) 14,377	0.152*** (5.2286) 7,776	0.028 (1.0103) 6,601	-0.145*** (-3.6907) 5,093	-0.006 (-.0937) 2,066	-0.232*** (-4.7637) 3,027
Quarter == 4	0.041** (2.5688) 21,512	0.059*** (2.6776) 11,549	0.024 (1.0256) 9,963	-0.112*** (-3.0659) 6,654	0.071 (1.306) 2,735	-0.241*** (-4.9797) 3,919
Quarter == 5	0.101*** (6.9147) 28,459	0.128*** (6.8443) 15,200	0.072*** (3.1862) 13,259	-0.077** (-2.0431) 8,121	0.073 (1.2234) 3,390	-0.193*** (-4.0638) 4,731
Quarter == 6	0.168*** (11.9054) 35,597	0.179*** (9.4711) 19,045	0.157*** (7.3775) 16,552	-0.13*** (-3.0631) 9,390	0.058 (.998) 3,982	-0.291*** (-4.7966) 5,408
Quarter == 7	0.141*** (10.2173) 42,644	0.156*** (8.5578) 22,796	0.124*** (5.9178) 19,848	-0.137*** (-3.1559) 10,530	-0.049 (-.8676) 4,544	-0.222*** (-3.411) 5,986
Quarter == 8	0.095*** (6.7409) 49,073	0.083*** (4.3649) 26,181	0.108*** (5.1839) 22,892	-0.103** (-2.1445) 11,469	-0.054 (-.8046) 5,030	-0.156** (-2.2645) 6,439

Balances: PMJDY and non-PMJDY Accounts

VARIABLES	(1) Log(1+Balance)	(2) Log(1+Balance)	(3) Log(1+Balance)
Quarter == 2 & PMJDY	0.3646*** (7.7196)	0.2822*** (3.8361)	0.3891*** (6.1546)
Quarter == 3 & PMJDY	0.4410*** (8.1210)	0.3016*** (3.5694)	0.5283*** (7.3764)
Quarter == 4 & PMJDY	0.4478*** (7.8323)	0.1873** (2.1906)	0.6379*** (8.2970)
Quarter == 5 & PMJDY	0.5106*** (8.5299)	0.2554*** (2.7735)	0.6988*** (8.8520)
Quarter == 6 & PMJDY	0.6812*** (10.1707)	0.3596*** (3.6814)	0.9332*** (10.1542)
Quarter == 7 & PMJDY	0.7315*** (10.6474)	0.4890*** (5.0149)	0.9196*** (9.4558)
Quarter == 8 & PMJDY	0.6909*** (9.5213)	0.4538*** (4.3429)	0.8827*** (8.7282)
Observations	61,389	31,622	29,767
R-squared	0.6885	0.6697	0.6992
Controls		Govt assisted quarter	
Fixed effects		Account	
Govt. Assisted a/c	All	Yes	No

Poisson Model: All Active Transactions

VARIABLES	(1)	(2)	(3)	(4)
	Transactions per Account			
Age (in Quarters)	0.0494*** (30.95)	0.0257*** (14.83)	-0.0676*** (-36.27)	
Age (in Quarters) x PMJDY			0.0962*** (39.10)	
Govt Assisted Quarter		0.519*** (37.33)	0.442*** (40.65)	0.479*** (33.37)
Quarter == 2				0.263*** (16.20)
Quarter == 3				0.260*** (15.97)
Quarter == 4				0.305*** (18.72)
Quarter == 5				0.235*** (14.21)
Quarter == 6				0.343*** (21.04)
Quarter == 7				0.365*** (22.30)
Quarter == 8				0.262*** (15.67)
Observations	59,417	59,417	71,962	59,417
Number of account Account	7,528 PMJDY	7,528 PMJDY	9,316 All	7,528 PMJDY

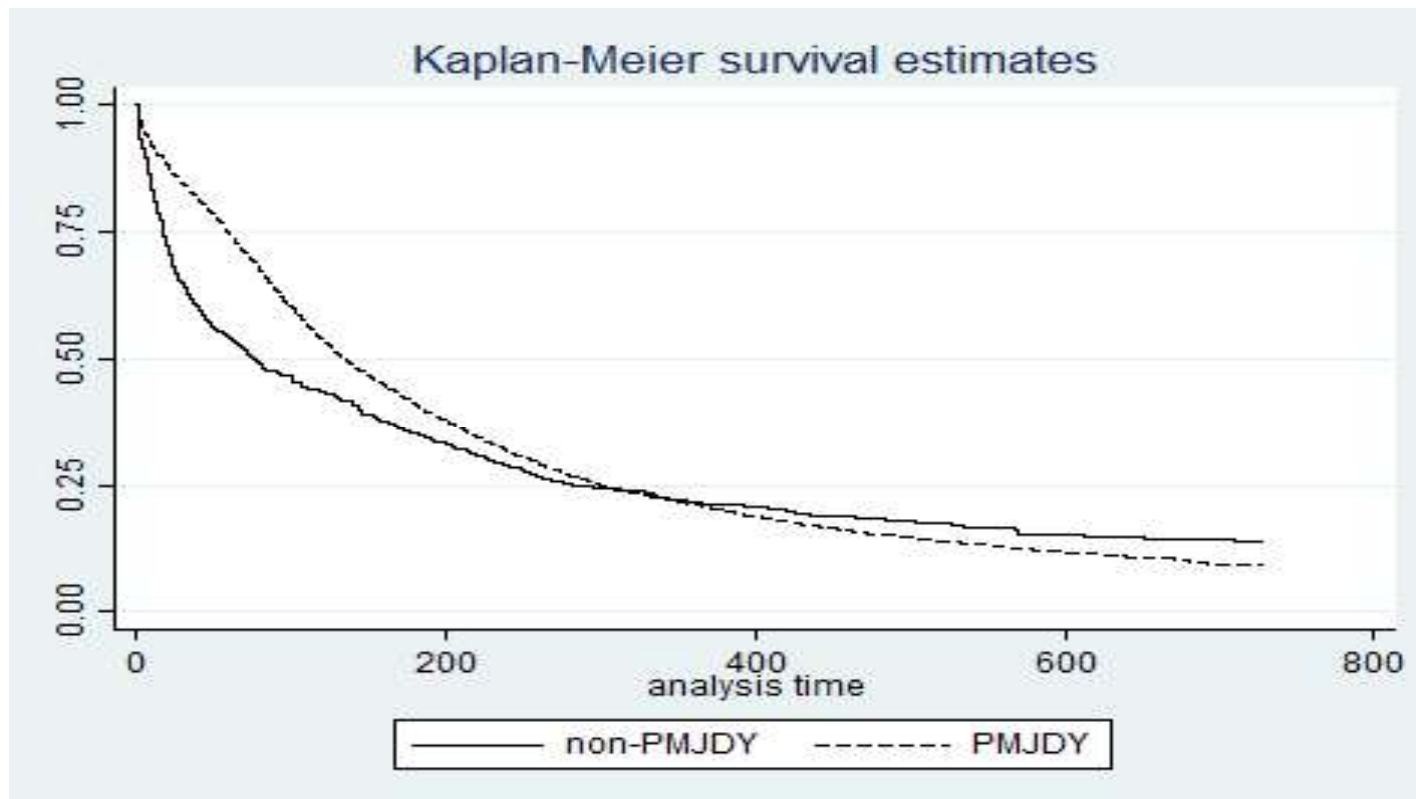
Poisson Model: By Transaction Type

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Transactions per Account							
	Active Deposits				Active Withdrawals			
Age (in Quarters)	-0.0670*** (-24.03)	-0.0588*** (-20.00)	-0.0813*** (-23.63)		0.108*** (54.45)	0.0721*** (33.35)	-0.0605*** (-27.25)	
Age (in Quarters) x PMJDY			0.0172*** (3.907)				0.139*** (46.25)	
Govt Assisted Quarter		-0.224*** (-8.510)	-0.0914*** (-4.358)	-0.178*** (-6.649)		0.757*** (44.25)	0.606*** (46.47)	0.635*** (35.78)
Quarter == 2				-0.060*** (-2.721)				0.691*** (27.65)
Quarter == 3				-0.200*** (-8.504)				0.805*** (32.73)
Quarter == 4				-0.400*** (-15.82)				0.962*** (39.67)
Quarter == 5				-0.376*** (-14.94)				0.851*** (34.54)
Quarter == 6				-0.230*** (-9.468)				0.946*** (38.67)
Quarter == 7				-0.345*** (-13.58)				1.017*** (41.77)
Quarter == 8				-0.484*** (-18.19)				0.929*** (37.68)
Observations	54,442	54,442	66,642	54,442	46,014	46,014	56,458	46,014
Number of account	6,901	6,901	8,643	6,901	5,826	5,826	7,265	5,826
Account	PMJDY	PMJDY	All	PMJDY	PMJDY	PMJDY	All	PMJDY

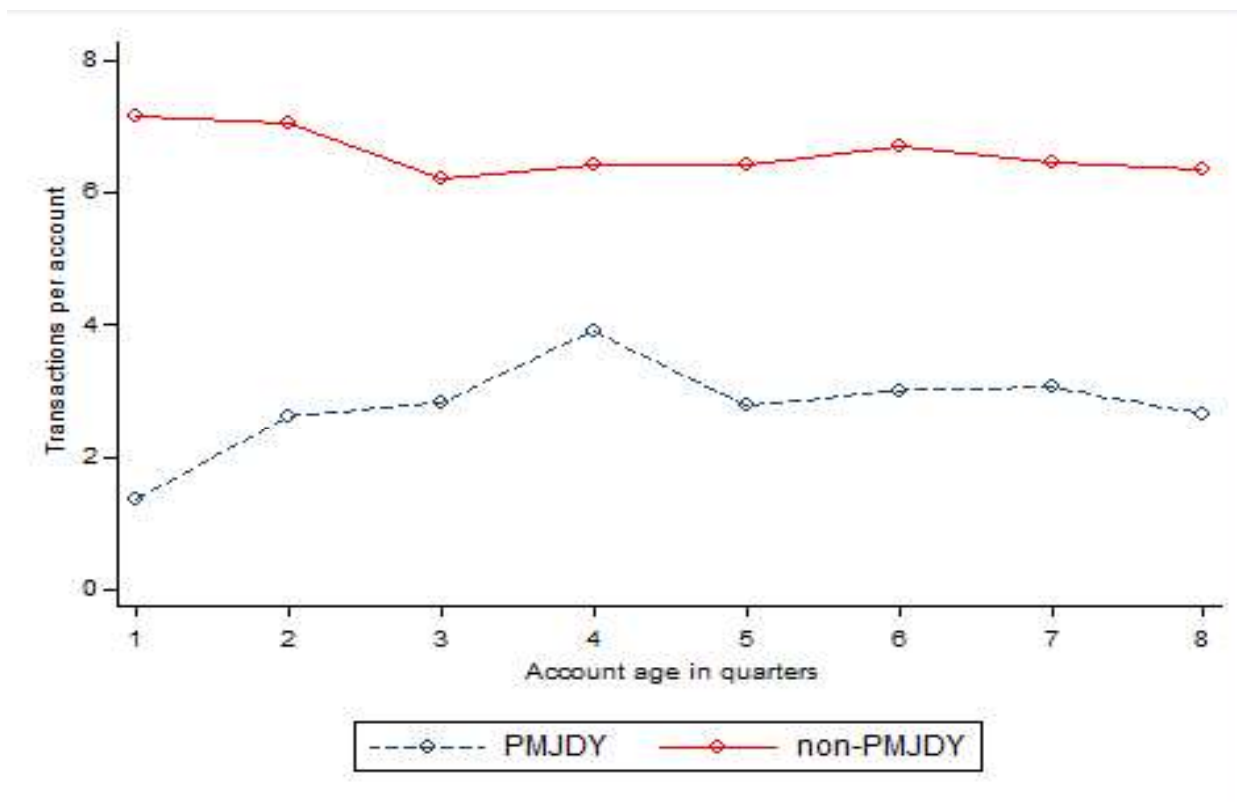
Zero Inflated Poisson Model

VARIABLES	(1)	(2)	(3)
	Transaction per account		
Age (in Quarters)	0.0261*** (21.65)	0.0454*** (36.91)	0.0555*** (32.32)
PMJDY			-1.180*** (-97.97)
Age (in Quarters) x PMJDY			0.0187*** (7.727)
Govt Assisted Quarter		-0.374*** (-54.41)	-0.210*** (-29.90)
<i>Zero inflation</i>			
PMJDY	0.717*** (36.29)	0.856*** (42.08)	0.742*** (36.88)
Govt Assisted Quarter		-1.323*** (-64.15)	-1.347*** (-61.87)
Observations	78,065	78,065	78,065
Account		All	

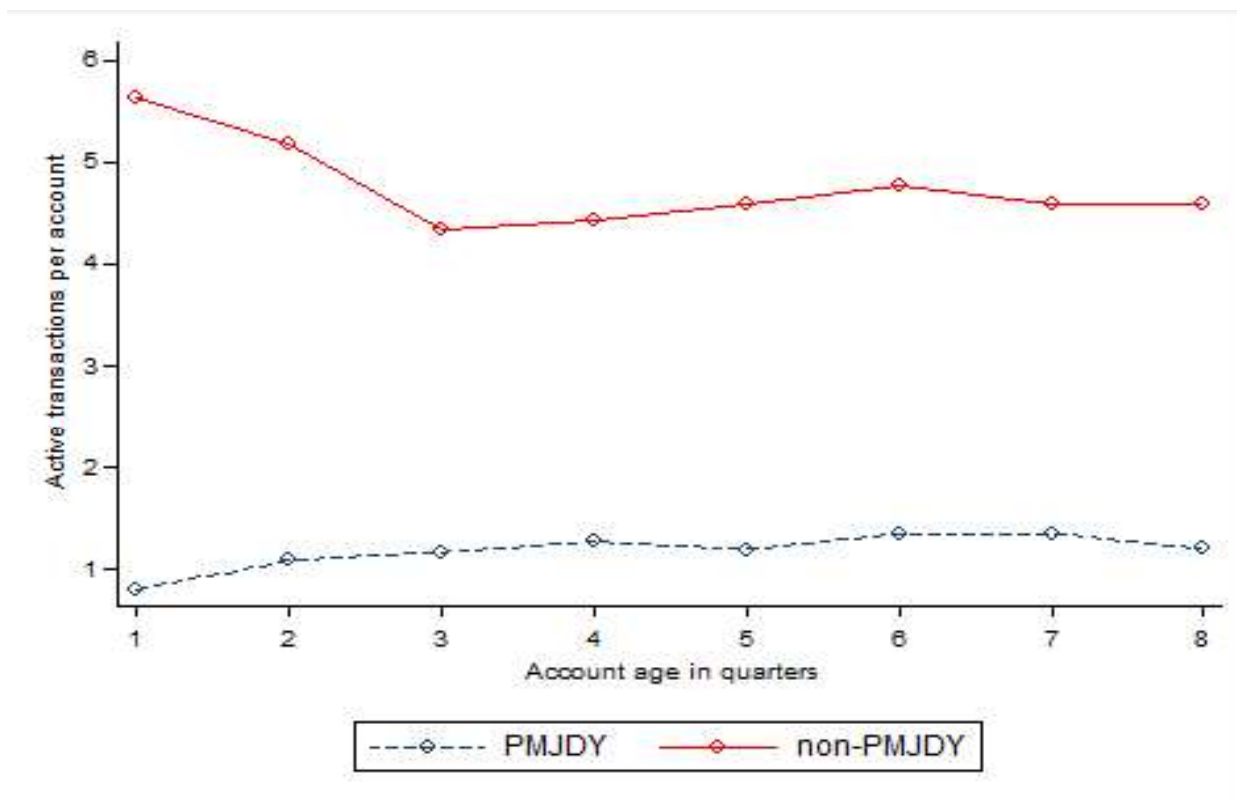
Kaplan Meier Survival Estimates for the hazard of account becoming active



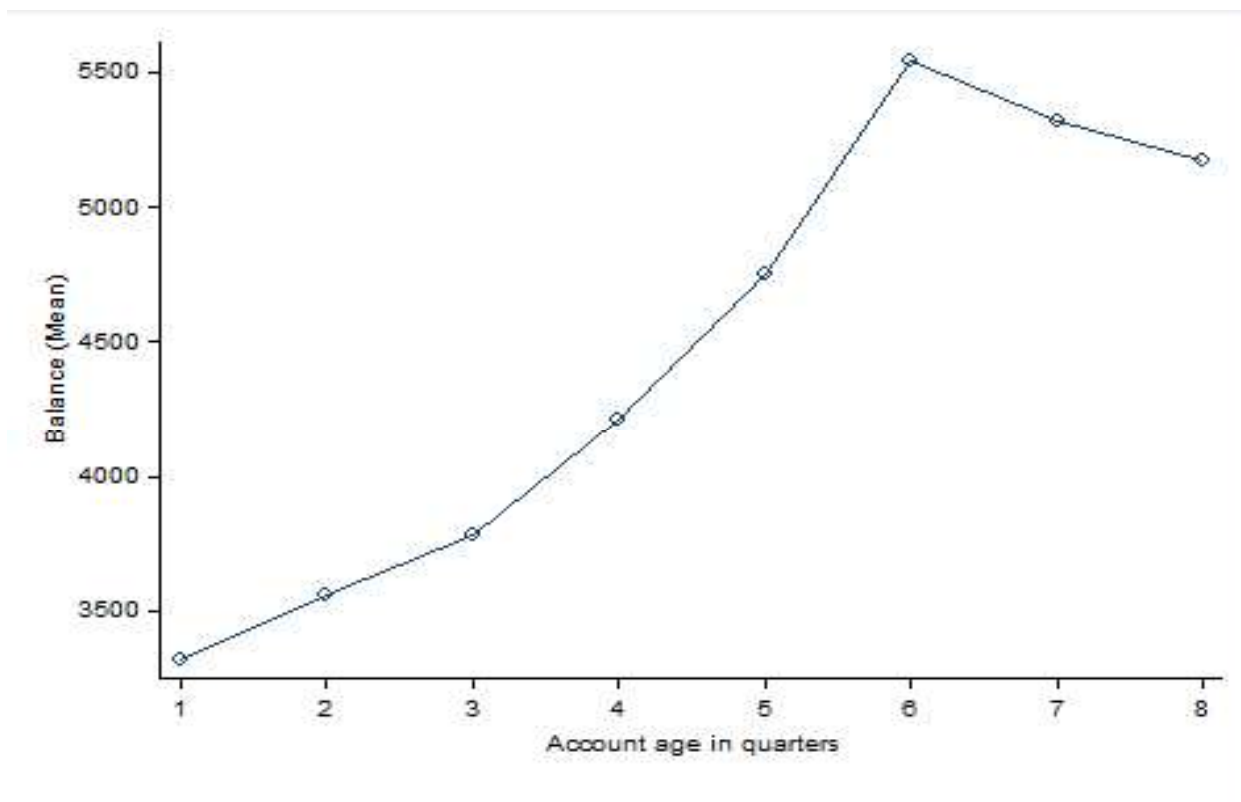
Ratio of total number of transactions to total number of accounts



Ratio of total number of active transactions to total number of accounts



Balance: PMJDY



Balance: non-PMJDY

