

Blood Money:
The Financial Implications of Plasma Sales
for Individuals and Non-Bank Lenders

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What is plasma?

- Component of blood, includes antibodies and clotting factors
 - ▶ Formed into medicines to treat immune deficiencies, hemophilia, etc...
- Growing form of discretionary income in the United States:
 - ▶ \$50 per donation (2-4x during pandemic)
 - ▶ FDA allows 2x per week (104 times per year), earning up to \$400 per month in normal times
 - ▶ Fairly accessible (just need to be in good health)
- 2-3% of U.S. donated plasma in 2019 – more used payday loans (1.5-2.4%), auto-title (0.9%), rent-to-own (1.2%), and pawn loans (1.5%)

CSL Plasma Advertisements

cslplasma.com/rewards-for-current-donors/reloadable-prepaid-card

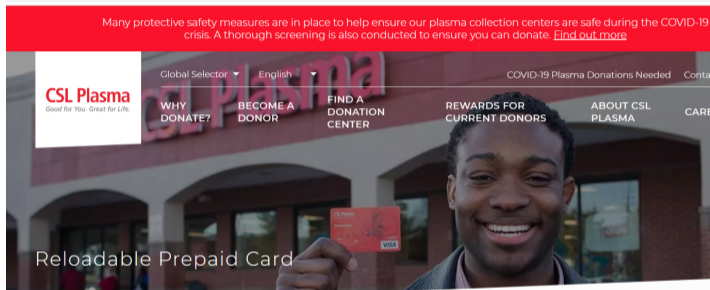
Many protective safety measures are in place to help ensure our plasma collection centers are safe during the COVID-19 crisis. A thorough screening is also conducted to ensure you can donate. [Find out more](#)

Global Selector English COVID-19 Plasma Donations Needed Contact Us

CSL Plasma
Good for You. Great for Life.

WHY DONATE? BECOME A DONOR FIND A DONATION CENTER REWARDS FOR CURRENT DONORS ABOUT CSL PLASMA CARE

Reloadable Prepaid Card



New Donors - Donate & Earn Up to \$400 this Month

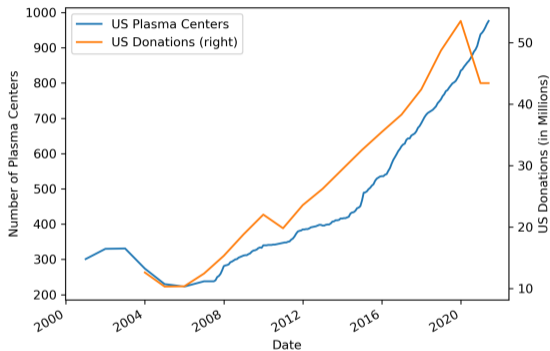
Applicable for eligible, qualified new donors. Fees vary by location. See below to find a CSL Plasma center that is close to you!

Corporations that operate plasma centers in United States

Corporation	Parent	Country	Ticker	# of Centers (2015)	# of Centers (2021)
CSL Plasma	CSL Ltd.	Australia	CSL (ASX)	109	284
Grifols	Grifols S.A.	Spain	GRF (BMAD)	216	276
Bioline Plasma	Takeda Pharmaceutical	Japan	TAK (NYSE)	71	151
Octapharma	Octapharma AG	Switzerland	Family Owned	51	144
BPL Plasma	Creat Group	China	Private	19	31
KED Plasma	Kedron Biopharma	Italy	Private	7	31
Immunotek Bio Centers	N/A	USA	Family Owned	0	22
GCAM Inc.	Green Cross Group	South Korea	006280 (KRX)	6	12
ADMA BioCenters	ADMA Biologics	USA	ADMA (NASDAQ)	0	4
Other				22	36

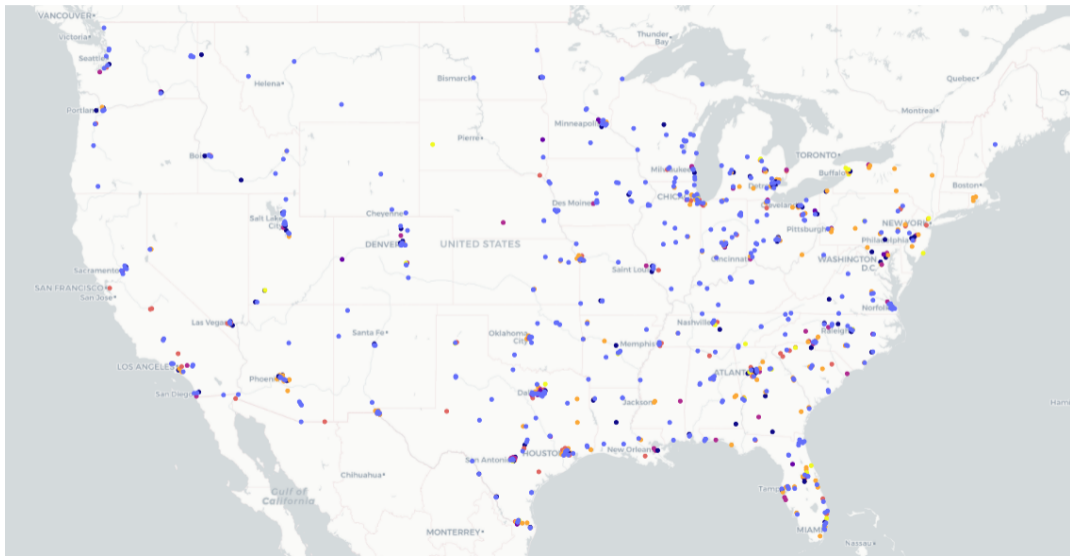
- Concentrated: top 4 pharmaceutical corporations operate 85% of centers
- All large plasma center operators are owned by international firms.

Exponential growth of plasma centers in United States



- # of plasma centers in U.S. more than **tripled** from 2009–2021 to ~1,000 locations
- Plasma represents nearly **2% of U.S. exports** (the 8th largest category)
 - ▶ ~3.7M adults in U.S. (**0.06%** of the world population) provided **64%** of the world's plasma
- Other countries that compensate: Germany, Austria, Hungary, and Checkoslovakia

Plasma centers



Motivation

Lack of household finance research on being able to sell one's biological material

- Not even basic descriptive information on characteristics and motives of plasma donors
- Growing literature on rideshare work and welfare (Fos et al. 2019; Buchak 2019; Barrios, Hochberg, and Yi 2020)
- Substitutes for payday loans: focused on bank overdrafts (Melzer and Morgan 2015; Morgan, Strain, and Seblani 2012; Di Maggio, Ma, and Williams 2020)
 - ▶ Exception Dettling and Hsu (2021): minimum wage hike leads to less payday loan usage in survey data

Ambiguous relationship between plasma income and high-interest debt

- Cash flow mismatch: plasma income (\$50 per donation) vs. payday (\$400) or installment loan (\$800)
- Little evidence that households maintain precautionary savings (Deaton 1991; Guiso, Jappelli, and Terlizzese 1992; Dynan 1993)
- The need for precautionary savings decreases with cheaper financing (ability to repay faster)

This paper

Research Questions:

- Who sells plasma and why?
- How does the ability to donate plasma affect non-bank credit?
- How does the ability to donate plasma affect consumption?

Limitation:

- Do not observe health outcomes
- Cannot take a position on how plasma donation affects welfare

Descriptive data

Only two national household finance surveys to ask about plasma donation

- Survey through **IRS Free File Alliance** (2018-2019)
 - ▶ Low-to-middle income, online tax filers
- Survey of the **Socioeconomic Impacts of COVID** (2020-2021)
 - ▶ Nationally representative

Descriptive results: who sells plasma and why?

- 2018-2019: 3.3% of respondents donated plasma in the past 6 months – more than took out a payday or auto-title, but fewer than pawned
 - ▶ Much higher rates during pandemic
- Typical donor: Age<35, no college degree, low-income, low credit scores, under-banked
- Much overlap in characteristics of plasma donors and payday borrowers
- By comparison, other types of gig workers are financially better off with access to bank credit
- Plasma income is used for essential/emergency expenses (64%) vs. non-essential goods (19%) vs. to repay debt (6%)

Data: Non-bank credit & Consumption

- Outcome variables

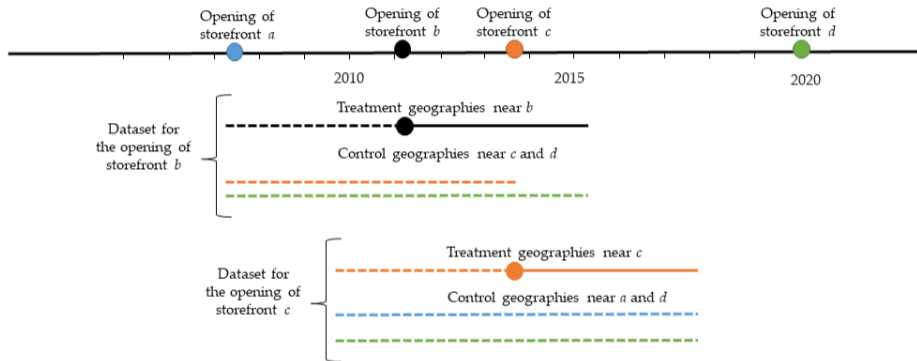
- ▶ Non-bank credit from **Experian's Clarity** (2014-2019)
- ▶ Foot traffic by establishment from **Safegraph** (2018-Present)

Identification strategy relies on variation in an individual's ability to donate plasma

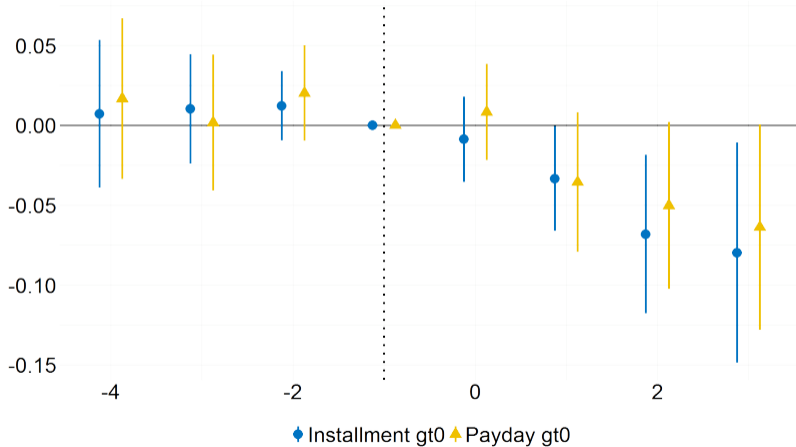
- Instrument: Plasma Center Openings

- ▶ **FDA's Blood Establishment Registration (BER)**
- ▶ Establishment records from **InfoGroup Reference USA** (2005-Present)
- ▶ Establishment photos from **Google Streetview and Earth**
- ▶ **Opening dates of 589 (95%) of the centers that opened in the 2014–2021 period**

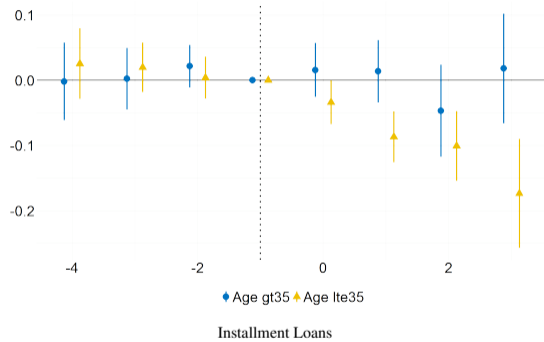
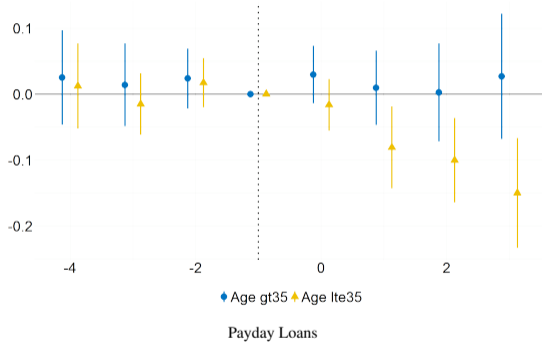
Method: Stacked Difference-in-Difference



Payday & Installment Loan Inquiries

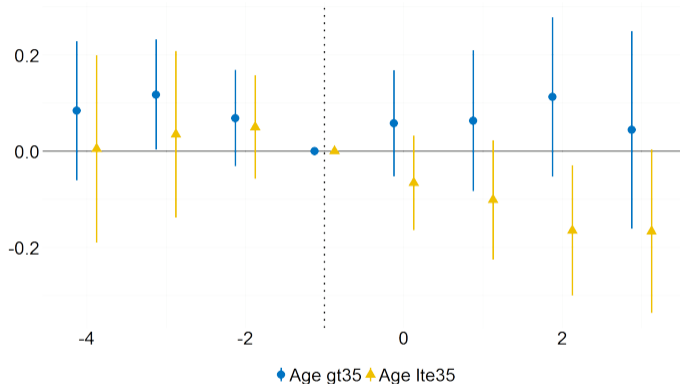


Payday & Installment Loan: Age Effect



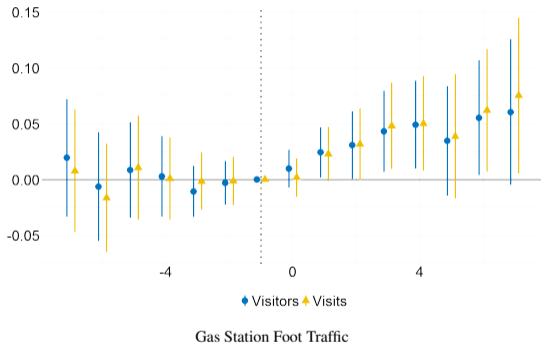
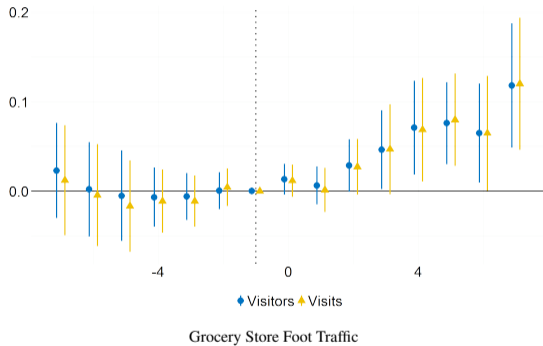
- Access to a plasma center reduces payday and installment loan inquiries by 13–16% for Age<35

Payday Loan Transactions



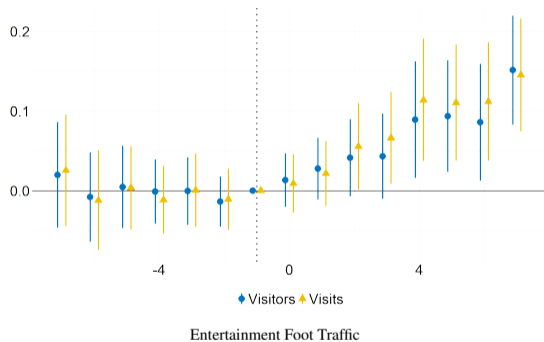
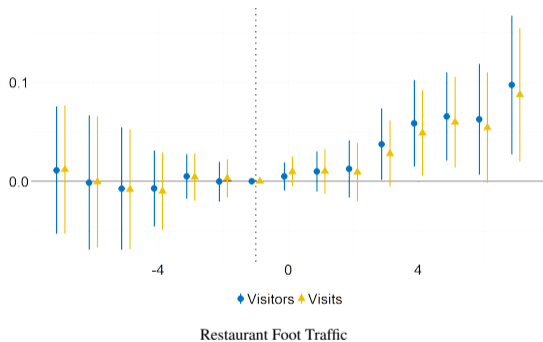
- Payday transactions drop by 18% for Age<35
- 18% drop in payday transactions after a plasma opening is \approx the effect of a \$1 minimum wage increase (16%) (Dettling and Hsu 2021)

Essential Establishments



- 7% increase in essential establishment foot traffic 2 years after opening.

Non-Essential Establishments



- 10% increase in non-essential establishment foot traffic 2 years after opening.

Summary

- Plasma donors tend to be younger and financially vulnerable, more so than other gig workers
- Plasma income seems to help infrequent borrowers avoid taking out loans rather than repay loans faster
- Back-of-the-envelope: households save ~\$200 million in financing costs annually because of access to a plasma center
- Wide boost in local consumption ($\uparrow 7-10\%$)
- Policy implications: Local economic multipliers from access to even modest and occasional supplemental income
- Potentially adverse long-term outcomes are unobserved. Net welfare impact unknown.

-  Barrios, John M, Yael V Hochberg, and Hanyi Yi (2020). *Launching with a parachute: The gig economy and new business formation*. Tech. rep. National Bureau of Economic Research.
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Morgan, Donald P, Michael R Strain, and Ihab Seblani (2012). “How payday credit access affects overdrafts and other outcomes”. In: *Journal of money, Credit and Banking* 44.2-3, pp. 519–531.