ABSTRACT

Payday Bankruptcy

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Payday loans are short term small dollar amount loans that are easy to acquire. Using 1997-2015 U.S. Courts data from all 50 states and Washington D.C., I analyze the effect of payday lending bans on non-business personal bankruptcy filings with a differences-in-differences approach. I find that a ban on payday loans has a significant effect on the number of non-business personal bankruptcy filings per 100,000 people. A ban on payday lending decreases the personal bankruptcy rate by 45.96 to 59.58 filings per 100,000 people per year, a 12.02 to 15.58% decrease from the 1997-2015 national average of 382.31. If payday loans are made to financially distressed individuals, a ban on payday loans should either increase or not change the number of bankruptcy filings. Instead, I find a decrease in personal bankruptcy filings which suggests that the restriction of credit in the form of a ban on payday lending enhances welfare.

Payday Bankruptcy

by

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DEDICATION

To my daughter and her mother

CHAPTER ONE

Introduction

[A] cash advance—also called a short-term loan, payday advance or a deferred deposit transaction—can help tide you over until your next payday... A single payday advance is typically for two to four weeks. However, borrowers often use these loans over a period of months, which can be expensive. Payday advances are not recommended as long-term financial solutions.
—Payday lender Cash America's website 2017[1]

The theory in the business is you've got to get that customer in, work to turn him into a repetitive customer, long-term customer, because that's really where the profitability is.
—Cash America CEO Daniel R. Feehan in 2007.
Feehan served as CEO from 2000-2015 and is currently Cash America's Executive Chairman of the Board. He has been with the company since 1988.[2]

[C]onsumers mostly either roll over or default, very few actually repay their loans in cash on the due date.
—Lawyer for payday loan industry, Hilary Miller, in a private email in 2005. Miller is also a lawyer for payday lender Dollar Financial Group, which finances the Consumer Credit Research Foundation. CCRF funds academic research in favor of payday lending.[3]

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1. *Cash Advances/Short-term loans*, Online; accessed 19-April-2017, 2017, http://archive.is/CrzMQ.

2. Bethany McLean, *Payday Lending: Will Anything Better Replace It?*, Online; accessed 3-May-2017, April 2016, http://archive.is/iYxKG%5C%5C; *Board of Directors*, Online; accessed 13-March-2017, 2017, http://archive.is/6xytN.

3. *Consumer Credit Research Foundation: Funding (and Editing!) Supposedly Independent Academic Payday Lending Research*, Online; accessed 7-June-2017, July 2016, http://archive.is/gjD0Y; Christopher Werth, *Tracking the Payday-Loan Industry's Ties to Academic Research*, Online; accessed 8-April-2017, April 2016, http://archive.is/SjJFj.

Some argue that payday loans offer a needed line of credit for individuals who otherwise do not have access to credit.[4] But, in light of the quotes I present above, it is incredible to think that there is still an ongoing debate about the true predatory nature of payday loans. Payday lenders pretend to offer a short-term solution to cash-strapped individuals, but really intend customers to take out multiple loans.[5] In fact, a new payday loan customer is only profitable after taking out four to five loans.[6] Lenders rely on borrowers becoming trapped in a cycle of debt and would not turn a profit otherwise.

What are Payday Loans?

The payday lending industry is a $38.5 billion market.[7] Payday loans are small short term loans that range from $100-$1000. They are very easy to acquire as payday lenders only need borrowers to present identification and proof of employment. Lenders do not run a credit check or inquire about the borrower's ability to pay back the loan.[8] Once approved, a borrower gives the lender a postdated check for the amount of the loan plus interest and fees, or electronic access to the borrower's bank account. Once the period of the loan is up, the lender cashes the check or pulls

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4. Edward C. Lawrence and Gregory Elliehausen, "A Comparative Analysis of Payday Loan Customers," *Contemporary Economic Policy* 26, no. 2 (2008): 299–316, ISSN: 1465-7287, doi:10.1111/j.1465-7287.2007.00068.x, http://dx.doi.org/10.1111/j.1465-7287.2007.00068.x.

5. McLean, *Payday Lending: Will Anything Better Replace It?*; Susanna Montezemolo, *Payday Lending Abuses and Predatory Practices*, technical report (Center for Responsible Lending, September 2013), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2391403.

6. Montezemolo, *Payday Lending Abuses and Predatory Practices*.

7. Yuka Hayashi, *U.S. to Curb Payday Lenders*, June 2016, http://archive.is/dSaWk.

8. Consumer Federation of America, *How Payday Loans Work*, Online; accessed 2-June-2017, 2017, http://archive.is/HaKww.

the money from the borrower's bank account. The entire amount of the loan is due at once.[9] The average payday loan is for $392 and lasts two weeks, with an APR of 339%.[10] The average borrower only makes $25,000, so many cannot actually afford the loan.[11] Borrowers end up rolling over the loan by taking out an additional payday loan in order to pay off the original debt. Fifty-two percent of new borrowers have to rollover their initial loan.[12] After taking out an initial loan, borrowers become trapped in a cycle of debt: "over 80% of payday loans are rolled over or followed by another loan within 14 days."[13] One in five payday loans ends in default.[14]

What is the Cycle of Debt?

The cycle of debt refers to the idea that one payday loan can snowball into a large amount of debt due to rollovers or renewals. A renewal is when borrowers repay the full amount of their loan and then take out an identical loan in the same day. Consider a person with zero savings who makes $25,000 a year and lives paycheck to paycheck. Working 50 weeks out of the year puts them at earning $1,000 per paycheck. Assuming his expenses are $1,000 per two weeks, he does not accrue any savings. One period, he overconsumes or has an unexpected expense totaling $100, and he will not be able to pay his bills. He takes out a payday loan for $300 with fees of $50, totaling $350 due on his next payday. He pays for his expenses and is left with $200. Next

9. Consumer Federation of America, *How Payday Loans Work.*

10. Chris Morran, *The Average Payday Loan Borrower Spends More Than Half The Year In Debt To Lender*, Online; accessed 17-April-2017, 2013, http://archive.is/WVteV.

11. Kathleen Burke et al., *CFPB Data Point: Payday lending*, technical report (CFPB Office of Research, March, 2014).

12. Ibid.

13. Ibid.

14. Consumer Federation of America, *How Payday Loans Work.*

pay period he has the same usual expenses of $1,000, but also has to pay back $350 for the loan. He only has $1,200 so he cannot afford his total expenses of $1,350. So, he rolls over his original payday loan by paying $50 in fees, or renews the loan by paying $350. At the end of this second pay period, he already has negative savings of -$50 and owes $350 on the loan. Note that a rollover is functionally equivalent to a renewal in terms of costs to the borrower.

Laws and Regulations

Payday loans are currently banned in 18 states and Washington D.C. Table 3.1 on page 14 breaks down payday lending legislation changes from 1996-2017.

Purpose

The purpose of this paper is to analyze the effects of payday loans on consumer welfare. I utilize law changes that ban payday loans in 12 states during the period from 1997 to 2015 to do a differences-in-differences analysis of the effect of payday legislation changes on non-personal bankruptcy filings per 100,000 people. Bankruptcy filings are the ultimate sign of financial distress, so any effect on bankruptcies discovered during my analysis will understate the effect of payday loan legislation on other types of financial distress.

Since many states have banned or increased regulations on payday lending, the results of this paper have direct policy implications: if payday loans significantly hurt consumers then it would be beneficial to ban them if the costs of regulation are outweighed by the welfare gain to consumers.

CHAPTER TWO

Literature Review

The current literature on payday lending is mixed. Papers tend to fall into two categories: those that find payday lending is beneficial versus those that find payday lending is harmful.

Papers with a Favorable or Neutral Stance on Payday Loans

Hynes uses national 1998-2009 data and finds no statistical increase in non-business bankruptcy filings after the legalization of payday loans.[1] However, payday lenders have operated in states where payday lending is not legalized on several occasions.[2] Because of this, enabling legislation is not binding.[3] Hynes could be finding no effect because he has coded certain states such as Georgia, Maryland, North Carolina, and Pennsylvania as not having legalized payday loans.[4] However, payday lenders operated (legally or not) in those states during the sample period and were subsequently banned within the same period. From Table 3.1 we see that Georgia banned payday lending in 2004, Maryland in 2000, North Carolina in 2005, and Pennsylvania in 2007.

1. Richard Hynes, "Payday Lending, Bankruptcy, and Insolvency," *Washington & Lee Law Review* 69, no. 2 (2012): 607–648.

2. Megan S. Knize, "Payday Lending in Louisiana, Mississippi, and Arkansas: Toward Effective Protections for Borrowers," *Louisiana Law Review* 69 (2009): 317–347; Donald P. Morgan, Michael R. Strain, and Ihab Seblani, "How payday credit access affects overdrafts and other outcomes," *Journal of Money, Credit and Banking* 44, nos. 2-3 (2012): 519–531, doi:10.1111/j.1538-4616.2011.00499.x, http://dx.doi.org/10.1111/j.1538-4616.2011.00499.x.

3. Morgan, Strain, and Seblani, "How payday credit access affects overdrafts and other outcomes."

4. Hynes, "Payday Lending, Bankruptcy, and Insolvency."

Bhutta, Goldin, and Homonoff use 2006-2012 Consumer Credit Panel and 2009-2013 Current Population Survey survey data and find that bans on payday loans reduce payday lending, but cause consumers to shift towards other high-interest forms of credit.[5] They also find that payday loan bans increase the rate of involuntary bank account closures. However Campbell, Martínez-Jerez, and Tufano uses actual ChexSystems data from 1999-2006 and find that payday loan bans decrease the rate of involuntary bank account closures.[6]

Lefgren and McIntyre compares bankruptcy rates across states from 1999 to 2001 and find that "payday loan regulations contribute virtually nothing to the cross-state variance in filing rates."[7] However, they fail to incorporate payday lending legislation changes that occurred in several states during that time period.

Morse uses 1996-2002 data from California and finds that access to payday loans decreases foreclosure rates in the wake of a natural disaster.[8] However, he "throw[s] out 11 large-city counties (out of a total of 58) with a population of 800,000 people."[9] He did not include San Francisco County or any counties bigger than San Francisco County (Los Angeles, San Diego, Orange, Riverside, etc.).

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5. Neil Bhutta, Jacob Goldin, and Tatiana Homonoff, "Consumer Borrowing After Payday Loan Bans," *Journal of Law and Economics* 59, no. 1 (2016), doi:10.1086/686033, https://doi.org/10.1086/686033.

6. Dennis Campbell, F. Asís Martínez-Jerez, and Peter Tufano, "Bouncing out of the banking system: An empirical analysis of involuntary bank account closures," *Journal of Banking & Finance* 36, no. 4 (2012): 1224–1235, ISSN: 0378-4266, doi:10.1016/j.jbankfin.2011.11.014, http://dx.doi.org/10.1016/j.jbankfin.2011.11.014.

7. Lars Lefgren and Frank McIntyre, "Explaining the Puzzle of Cross-State Differences in Bankruptcy Rates," *The Journal of Law and Economics* 52, no. 2 (2009): 367–393, doi:10.1086/596561, https://doi.org/10.1086/596561.

8. Adair Morse, "Payday lenders: Heroes or villains?," *Journal of Financial Economics* 102, no. 1 (2011): 28–44, ISSN: 0304-405X, doi:10.1016/j.jfineco.2011.03.022, http://dx.doi.org/10.1016/j.jfineco.2011.03.022.

9. Ibid.

Lawrence and Elliehausen use survey data and find "a strong demand for payday loans that satisfy a real financial need within a certain segment of the population."[10] However, they admit that this survey data is provided by the payday loan industry trade association.

Papers with an Unfavorable Stance on Payday Loans

Morgan, Strain, and Seblanistudy the effect of payday legislation changes on Chapter 13 bankruptcy filings per 10,000 people from 1998-2008.[11] They find that bankruptcy filings increase when payday loans are banned and the number of bounced checks and overdrafts also increases. However, complaints against lenders and debt collectors increase. This could mean that households that would have filed for bankruptcy prior to a payday lending ban instead choose informal bankruptcy where they are not protected from creditors.[12]

Carrell and Zinman used Air Force data to show that access to payday loans decreases job performance.[13] Airmen are so distracted by financial distress brought on by payday lending that they are less able to focus at work. Graves Find that payday lenders target the military and concentrate in areas near military bases.[14] They find that the only way to prevent this targeting is the "aggressive and consistent

10. Lawrence and Elliehausen, "A Comparative Analysis of Payday Loan Customers."

11. Morgan, Strain, and Seblani, "How payday credit access affects overdrafts and other outcomes."

12. Ibid.

13. Scott Carrell and Jonathan Zinman, "In Harm's Way? Payday Loan Access and Military Personnel Performance," *Review of Financial Studies* 27, no. 9 (2014): 2805–2840, doi:10.1093/rfs/hhu034, https://doi.org/10.1093/rfs/hhu034.

14. Christopher L. Graves Steven M. Peterson, "Predatory Lending and the Military: The Law and Geography of Payday Loans in Military Towns," *Ohio State Law Journal* 66 (2005): 653–832, doi:10.2139/ssrn.694141, http://dx.doi.org/10.2139/ssrn.694141.

enforcement of civil and criminal usury law."[15] Airmen are not representative of the population as a whole, so access to payday lending may have less negative effects on the civilian population.

Melzer uses 1997, 1999, and 2002 National Survey of American Families data to show that access to payday loans increases the difficulty of paying mortgage, rent, and utilities bills.[16] Skiba argues in favor of rollover restrictions over outright bans and provides evidence in favor of larger loan sizes.[17] Specifically, she finds that "a $50 increase in loan size leads to a 5.8–6.8 percentage point decrease in the probability of default."[18] She also finds that loan duration regulations are ineffective.

DeYoung and Phillips find evidence of non-competitive pricing and collusion by payday lenders in Colorado from 2000-2006.[19] But, Colorado is not representative of the United States as a whole.

Bertrand and Morse run an experiment where they use different methods of informing potential payday customers about the financial implications of borrowing a payday loan.[20] They demonstrate that people do not always realize the consequences

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15. Graves, "Predatory Lending and the Military: The Law and Geography of Payday Loans in Military Towns."

16. Brian T. Melzer, "The real costs of credit access: Evidence from the payday lending market," *The Quarterly Journal of Economics* 126, no. 1 (2011): 517–555, doi:10.1093/qje/qjq009, https://doi.org/10.1093/qje/qjq009.

17. Paige Marta Skiba, "Regulation of Payday Loans: Misguided?," *Washington & Lee Law Review* 69 (2012): 1023–1049, http://scholarlycommons.law.wlu.edu/wlulr/vol69/iss2/14.

18. Ibid.

19. Robert DeYoung and Ronnie Phillips, *Payday Loan Pricing*, technical report RWP 09-07 (Federal Reserve Bank of Kansas City, February 2009), 1–47, doi:10.2139/ssrn.1066761, http://dx.doi.org/10.2139/ssrn.1066761.

20. Marianne Bertrand and Adair Morse, "Information disclosure, cognitive biases, and payday borrowing," *The Journal of Finance* 66, no. 6 (2011): 1865–1893, doi:10.1111/j.1540-6261.2011.01698.x, http://dx.doi.org/10.1111/j.1540-6261.2011.01698.x.

and terms of payday loans. Potential payday loan customers informed of the adding-up of fees from rolling over the initial loan are 11% less likely to use a payday loan within the next four months compared to controls.[21] This experiment was only done at one store in one state, but shows that some payday loan customers do not fully understand the terms of the loan.

Skiba and Tobacman utilize regression discontinuity on 2000-2004 loan records from a payday lender in Texas to demonstrate that first-time payday borrowers are significantly more likely to take out additional loans and eventually file for bankruptcy due to the interest burden.[22] They also find that payday debtors also tend to file for Chapter 13 bankruptcy versus Chapter 7 bankruptcy due to lower upfront fees.[23] Again, this data comes from one lender in one state, but shows the devastating financial impact payday loans can have Campbell, Martínez-Jerez, and Tufano use ChexSystems data from 2002-2005 and find that access to payday loans increases the rate of involuntary bank account closures.[24] "The presence of this high-cost, short-term credit adds to the over-extension of household budgets, and exacerbates the rate at which households overdraw their account."[25]

Barth et al. use state-regulatory data on payday lending and find that payday lenders concentrate more in areas with a higher percentage of blacks, while concen-

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21. Bertrand and Morse, "Information disclosure, cognitive biases, and payday borrowing."

22. Paige Marta Skiba and Jeremy Tobacman, "Do Payday Loans Cause Bankruptcy?" (Working paper, 2015), 1–50, doi:10.2139/ssrn.1266215, http://dx.doi.org/10.2139/ssrn.1266215.

23. Ibid.

24. Campbell, Martínez-Jerez, and Tufano, "Bouncing out of the banking system: An empirical analysis of involuntary bank account closures."

25. Ibid.

trating less in areas with a higher percentage of Hispanics or Asians.[26] They also find that lenders concentrate in more impoverished areas, and in disaster-prone areas.[27] Payday lenders also set up more storefronts in states where regulations are more relaxed.[28]

Agarwal, Skiba, and Tobacman uses merged administrative data from a payday lender and another financial institution to demonstrate that most customers of the payday lender they studied had "substantial credit card liquidity on the days they take out their payday loans."[29] They also find that "taking out a payday loan predicts nearly a doubling in the probability of serious credit card delinquency over the next year."[30]

Source Credibility

Unfortunately, there has been at least one confirmed case of the payday lending industry influencing academic research. The Consumer Credit Research Foundation paid professor Mark Fusaro of Arkansas State University $23,900 to write a paper about payday loans. Normally there is nothing wrong with a nonprofit funding academic research. However, CCRF's Chairman is Hilary Miller, an attorney for payday lender Dollar Financial Group as well as the payday lending industry as a whole.[31]

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26. James R. Barth et al., "Do state regulations affect payday lender concentration?," Special Issue on Regulating Consumer Credit, *Journal of Economics and Business* 84 (2016): 14–29, ISSN: 0148-6195, doi:10.1016/j.jeconbus.2015.08.001, http://dx.doi.org/10.1016/j.jeconbus.2015.08.001.

27. Ibid.

28. Ibid.

29. Sumit Agarwal, Paige Marta Skiba, and Jeremy Tobacman, "Payday Loans and Credit Cards: New Liquidity and Credit Scoring Puzzles?," *American Economic Review* 99, no. 2 (May 2009): 412–17, doi:10.1257/aer.99.2.412, http://dx.doi.org/10.1257/aer.99.2.412.

30. Ibid.

Emails obtained by a Freedom of Information Act request reveal that Miller actually wrote sections of Fusaro's paper, even though Fusaro states that "the Foundation exercised no control over the research or the editorial content of this paper."[32]

I present this cases to demonstrate to the reader that payday loan literature has potential for bias due to possible conflicts of interest. But, the data I present and analyze in this paper is not subject to bias because it is actual data on bankruptcy filings, payday lending legislation, gross state product, and demographics.

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31. *Consumer Credit Research Foundation: Funding (and Editing!) Supposedly Independent Academic Payday Lending Research*; Werth, *Tracking the Payday-Loan Industry's Ties to Academic Research*.

32. Werth, *Tracking the Payday-Loan Industry's Ties to Academic Research*; *Consumer Credit Research Foundation: Funding (and Editing!) Supposedly Independent Academic Payday Lending Research*; Marc Anthony Fusaro and Patricia J Cirillo, "Do payday loans trap consumers in a cycle of debt?," November 2011, doi:10.2139/ssrn.1960776, http://dx.doi.org/10.2139/ssrn.1960776.

CHAPTER THREE

Methods

Data

I gathered state level data on the legality of payday loans from 1997 to 2015 from a variety of sources. I largely drew from Hynes and Morgan, Strain, and Seblani, as well as Consumer Federation of America.[1] Because the legality of payday lending is often unclear, I follow Morgan, Strain, and Seblani and use two variables to account for the legal status of payday loans: *Banned* and *Enabled*.[2] $Banned = 1$ after a state outlaws payday loans and 0 otherwise. $Enabled = 1$ after a state specifically allows payday lending and 0 otherwise. If, during the period discussed, a state enables payday loans and then later bans them, $Enabled = 1$ for the years in which payday lending was authorized and $Enabled = 0$ once payday loans are banned. There are several observations where both *Banned* and *Enabled* equal 0 due to the unclear nature and enforcement of state lending laws. To be clear, *Banned* does not always equal 1 when *Enabled* equals 0. Since *Banned* and *Enabled* can simultaneously be 0, there are effectively three legal regimes:

(1) No legislation: $Enabled = 0$ $Banned = 0$

(2) Enabling Legislation: $Enabled = 1$ $Banned = 0$

(3) Banning Legislation: $Enabled = 0$ $Banned = 1$

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1. Hynes, "Payday Lending, Bankruptcy, and Insolvency"; Morgan, Strain, and Seblani, "How payday credit access affects overdrafts and other outcomes"; Consumer Federation of America, *Legal Status of Payday Loans by State*, Online; accessed 25-March-2017, 2017, http://archive.is/EMHqM.

2. Morgan, Strain, and Seblani, "How payday credit access affects overdrafts and other outcomes."

So, both *Enabled* and *Banned* can be included together in a regression without falling into the dummy variable trap.

For example, payday lending was never authorized in Georgia, but payday lenders operated in the state until payday lending became a felony in 2004.[3] A similar story happened in Pennsylvania, West Virginia, and Maryland. North Carolina is an interesting case because payday loans were only legal there from the end of 1997 to early 2001, but payday lenders remained in the state until the state attorney general stepped in at the end of 2005.[4] On the other hand, In Arkansas, payday loan companies ignored the 17% usury cap set by the Arkansas constitution. They then later successfully lobbied for the legalization of their operations with the Check Cashers Act of 1999.[5] *Banned* is a better measure of payday loan legality versus *Enabled* since *Banned* can be evaluated by the number of payday loan storefronts operating within a state. If payday loans are truly banned, this number should equal zero.[6] One of the states in my analysis, Maine, has always had payday loans outlawed by the 36% usury rate defined in its constitution. However, Barth et al. show that it has 11 payday lenders.[7] Later in this paper, I omit Maine for robustness, but there is no effect. Oregon and Colorado are also both listed as having active payday lenders, but their loan terms are for 30 days or more and so are not true payday loans.[8]

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3. Hynes, "Payday Lending, Bankruptcy, and Insolvency," p. 620.

4. Morgan, Strain, and Seblani, "How payday credit access affects overdrafts and other outcomes," 529–530; Hynes, "Payday Lending, Bankruptcy, and Insolvency," 648.

5. Knize, "Payday Lending in Louisiana, Mississippi, and Arkansas: Toward Effective Protections for Borrowers."

6. Barth et al., "Do state regulations affect payday lender concentration?"

7. Ibid.

8. Consumer Federation of America, *How Payday Loans Work*.

Because of the confusing legality of payday lending, I have included Table 3.1 which breaks down all of the legislation changes. In sum, there are 12 states which ban payday lending and 18 states which enable payday lending during 1997-2015:

Table 3.1. Payday Loan Law Changes by State from 1997-2017

Always Prohibited	Always Legal	Enabled	Enabled Date	Banned	Banned Date
CT	CA	AL	Jun. 2003	AZ	Jul. 2010
ME	DE	AK	Jun. 2004	AR	Mar. 2008
MA	FL	AZ	Apr. 2000	CO	Aug. 2010
NJ	ID	AR	Apr. 1999	D.C.	Nov. 2007
NY	IL	D.C.	May 1998	GA	May 2004
VT	IN	HI	Jul. 1999	MD	Jun. 2000
	IA	LA	Aug. 1997	MT	Jan. 2011
	KS	MI	Nov. 2005	NH	Jan. 2009
	KY	MS	Jul. 1998	NC	Dec. 2005
	MN	NV	Jul. 1998	OR	Jul. 2007
	MO	NH	Jan. 2000	PA	Nov. 2007
	NE	NC	Oct. 1997	SD	Nov. 2016
	NM	ND	Apr. 2001	WV	Jun. 2006
	UT	OK	Sept. 2003		
	WA	RI	Jul. 2001		
	WI	TN	Oct. 1997		
	WY	TX	Sept. 1997		
		VA	Apr. 2002		

Richard Hynes, "Payday Lending, Bankruptcy, and Insolvency," *Washington & Lee Law Review* 69, no. 2 (2012): 607–648 Donald P. Morgan, Michael R. Strain, and Ihab Seblani, "How payday credit access affects overdrafts and other outcomes," *Journal of Money, Credit and Banking* 44, nos. 2-3 (2012): 519–531, doi:10.1111/j.1538-4616.2011.00499.x, http://dx.doi.org/10.1111/j.1538-4616.2011.00499.x Consumer Federation of America, *Legal Status of Payday Loans by State*, Online; accessed 25-March-2017, 2017, http://archive.is/EMHqM

I use 1997 to 2015 United States Courts data which breaks down bankruptcy filings by year, state, court district, and whether the filing is business or non-business.[9] I choose 1997-2015 data because it is the most recent data available. For my controls, I use 1997-2015 Center for Disease Control data for annual state-level population

9. United States Courts, *Caseload Statistics Data Tables*, Online; accessed 12-Feb-2017, 2017, https://archive.is/ZAKgj.

estimates and demographic statistics such as age and race.[10] I also use 1997-2015 Bureau of Labor Statistics data on state-level labor force participation, 1999-2016 New York Federal Reserve Consumer Credit Panel state-level debt data, along with 1997-2015 Bureau of Economic Analysis gross state product and consumer expenditure data data.[11] The consumer expenditure data contains information on per capita spending for several categories by state and year. I used consumer price index data from Calculator to standardize dollar amounts into 2015 dollars.[12] The dataset I use has 19 years of data on 50 states plus Washington D.C. for a total of 969 observations. I list summary statistics for the data below in Table 3.2 on page 18.

Bankruptcy

Since I am studying the effect of payday lending legislation changes on personal bankruptcy, it is important to know the potential causes of bankruptcy in order to control for them within my model. According to Investopedia, the top five causes of bankruptcy are:[13]

(1) Medical Expenses

(2) Job Loss

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10. Center for Disease Control, *Bridged-Race Population Estimates 1990-2015*, Online; accessed 15-March-2017, 2017, http://archive.is/hP9bw.

11. Bureau of Labor Statistics, *States: Employment status of the civilian noninstitutional population, 1976 to 2016 annual averages*, Online; accessed 16-March-2017, 2017, http://archive.is/8MGCJ; Federal Reserve Bank of New York, *State Level Household Debt Statistics 1999-2016*, Online; accessed 2-May-2017, 2017, http://archive.is/EQemY; Bureau of Economic Analysis, *Interactive Data: Regional* [in EN-US], Online; accessed 20-May-2017, 2017, http://archive.is/Lm92o.

12. US Inflation Calculator, *Consumer Price Index Data from 1913 to 2017*, Online; accessed 20-March-2017, 2017, http://www.usinflationcalculator.com/inflation/historical-inflation-rates.

13. Mark P Cussen, *Top 5 Reasons Why People Go Bankrupt*, Online; accessed 04-Feb-2017, January 2016, http://archive.is/owxwm.

(3) Poor/Excess Use of Credit

(4) Divorce/Separation

(5) Unexpected Expenses

In my model I control for medical expenses with aggregate per capita medical expenditures by state and year. I also control for job loss with percent employment data. However, I do not have data on divorce or unexpected expenses.

Model

I measure the effect of payday lending law changes on consumer financial distress, specifically bankruptcy filings per 100,000 people. My initial specification assumes the decision to ban payday lending is not affected by bankruptcy filings. Subsequent specifications add additional controls. I assume that payday lending legislation is exogenous, but also introduce specifications with controls that should correct for potential endogeneity. I use a lagged version of *Banned*: $Bannedlag_{st} = 1$ when payday lending has been banned in a state for at least one year. I do this to ensure that no bankruptcy filings should be caused by payday lending in states where were $Bannedlag_{st} = 1$. For example, if an individual is financially distressed because of payday loans taken out in 2006 and his or her state bans payday loans in 2007, that individual may still need to file for bankruptcy in 2007. For that state and year $Banned_{st} = 1$, but $Bannedlag_{st} = 0$. So, when $Bannedlag_{st} = 1$ there should be few to no bankruptcies caused by payday lending.

I use a differences-in-differences model with state and year fixed effects and standard errors clustered by state. I begin with the basic model without any controls, then add in medical expenditures, percent employment, GSP per capita, sex, race, and industry controls:

$$Filings_{st} = \beta Bannedlag_{st} + \gamma Controls_{st} + \delta_s + \delta_t + \delta + \epsilon_{st} \tag{3.1}$$

I also use a model with state time trends:

$$Filings_{st} = \beta Bannedlag_{st} + \gamma Controls_{st} + \delta_s * Trend + \delta_t + \delta + \epsilon_{st} \tag{3.2}$$

For robustness, I also regress personal bankruptcy filings per 100,000 on the non-lagged indicator of a payday loan ban, *Banned*:

$$Filings_{st} = \beta Banned_{st} + \gamma Controls_{st} + \delta_s + \delta_t + \delta + \epsilon_{st} \tag{3.3}$$

$$Filings_{st} = \beta Banned_{st} + \gamma Controls_{st} + \delta_s * Trend + \delta_t + \delta + \epsilon_{st} \tag{3.4}$$

The annual bankruptcy reports are ended in the month of September, rather than December. But, my values for *Banned* and *Bannedlag* reflect this. To replicate this study, one just needs to add a year to each value in Table 3.1. For example, in 2011 $Banned = 1$ for the state of Arizona since Arizona banned payday loans in July 2010. In 2010, $Banned = 0$ for Arizona because payday loans were only banned for three months of the filing period: July, August, and September 2010.

Table 3.2. Data Summary Statistics

VARIABLES	Mean	Std. Dev.	Min.	Max.
Year	—	—	1997	2015
Filings per 100,000 Persons	382.31	180.29	48.59	1,086.63
			(AK 2015)	(TN 2003)
Population	5,844,299	6,534,403	489,451	39,144,818
			(WY 1997)	(CA 2015)
Population Breakdown by Sex:				
Percent Male	49.42%	.80%	47.48%	52.74%
Percent Female	50.58%	0.80%	47.26%	52.52%
Population Breakdown by Age Group:				
Percent Minor	27.31%	2.28%	20.47%	37.23%
Percent Adult	48.77%	2.17%	43.66%	57.48%
Percent Senior	23.92%	3.37%	11.49%	34.54%
Population Breakdown by Race:				
Percent White	75.31%	14.07%	27.58%	97.61%
Percent Black	10.94%	10.80%	0.32%	59.03%
Percent Hispanic	8.04%	6.90%	0.52%	32.44%
Percent Indian	1.81%	2.93%	0.13%	16.51%
Percent Asian	3.91%	8.37%	0.48%	62.99%
GSP per Capita	44,477.93	18,375.42	21,041.74	180,172.50
Industry Share of GSP:				
Agriculture	1.65%	1.89%	0.00%	13.05%
Mining	2.78%	5.92%	0.00%	39.36%
Utilities	1.82%	0.53%	0.57%	3.83%
Construction	4.49%	1.15%	0.87%	10.56%
Manufacturing	12.98%	6.10%	0.20%	30.68%
Wholesale Trade	5.55%	1.34%	0.83%	8.94%
Retail Trade	6.59%	1.41%	1.09%	11.12%
Transportation	3.23%	1.53%	0.28%	13.07%
Information	3.85%	1.76%	1.22%	13.04%
Finance	18.67%	5.44%	8.47%	48.31%
Services	9.97%	3.27%	3.37%	25.90%
Education	7.82%	1.82%	3.28%	13.38%
Art and Recreation	3.95%	2.37%	2.40%	22.41%
Other Services	2.46%	0.63%	1.27%	6.55%
Government	14.20%	4.35%	8.29%	39.81%

CHAPTER FOUR

Results

In Table 4.1 and Table 4.2 I list the results of my analysis of the effects of payday loan legislation on personal bankruptcy filings per 100,000 people. In every specification, β (the coefficient of *Bannedlag*) is significant at less than the 5% significance level. When excluding Alabama, Arkansas, and Oklahoma — states where payday lending laws were somewhat unclear during the sample period, β is still significant at the 5% significance level in eight of eight specifications. The results from the base model and the model with excluded states are robust to state time trends. I choose to exclude these states based on the example of Carrell and Zinman and Morgan, Strain, and Seblani.[1] Banning payday lending decreases personal bankruptcy filings per 100,000 people by 38.79 to 61.33. The mean of *Filings* is 382.308, so banning payday loans decreases the personal bankruptcy rate by 10.15 to 16.04%.

When using *Banned* rather than *Bannedlag*, the coefficient on *Banned* is still negative and significant at the 10% significance level in six of eight specifications. When excluding Alabama, Arkansas, and Oklahoma, it remains significant at less the 1% significiance level in two of eight specifications. Table 4.3 and Table 4.4 list the results of the model when using *Banned* instead of *Bannedlag*.

These results reflect the line of reasoning that payday loans cause some consumers to enter into a cycle of debt where they have to take out an additional loan to pay off the initial loan and then have to take out a third loan to pay off the second loan, etc. until they are so financially distressed that they file for bankruptcy. Or, in

1. Carrell and Zinman, "In Harm's Way? Payday Loan Access and Military Personnel Performance"; Morgan, Strain, and Seblani, "How payday credit access affects overdrafts and other outcomes."

states where rollovers are not permitted, the fees from being unable to pay off the loan increase an individual's debt, and the individual has no credit access since the amount of payday loans he or she can take out is now limited.

Table 4.1. Impact of Payday Loan Law Changes on Bankruptcy Filings Per Capita

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bannedlag	-47.947**	-46.781**	-42.310**	-41.683**	-40.891**	-47.695**	-58.440***	-59.771***
Medical Expenses	-	Y	Y	Y	Y	Y	Y	Y
Percent Employed	-	-	Y	Y	Y	Y	Y	Y
GSP per Capita	-	-	-	Y	Y	Y	Y	Y
Sex	-	-	-	-	Y	Y	Y	Y
Race	-	-	-	-	-	Y	Y	Y
Industry	-	-	-	-	-	-	Y	Y
State trends	-	-	-	-	-	-	-	Y

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
All specifications include state level fixed effects.

Table 4.2. Impact of Payday Loan Law Changes on Bankruptcy Filings Per Capita (Excl.)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bannedlag	-46.609**	-45.983**	-41.097**	-40.535**	-38.792**	-45.927**	-59.649***	-61.326***
Medical Expenses	-	Y	Y	Y	Y	Y	Y	Y
Percent Employed	-	-	Y	Y	Y	Y	Y	Y
GSP per Capita	-	-	-	Y	Y	Y	Y	Y
Sex	-	-	-	-	Y	Y	Y	Y
Race	-	-	-	-	-	Y	Y	Y
Industry	-	-	-	-	-	-	Y	Y
State trends	-	-	-	-	-	-	-	Y

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
All specifications include state level fixed effects. Excludes Alabama, Arkansas, and Oklahoma due to unclear nature of payday loan legality in those states during 1997-2015.

Table 4.3. Impact of Payday Loan Law Changes on Bankruptcy Filings Per Capita

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Banned	-38.226*	-37.171*	-31.597	-31.112*	-30.102	-38.045*	-48.952***	-42.642***
Medical Expenses	-	Y	Y	Y	Y	Y	Y	Y
Percent Employed	-	-	Y	Y	Y	Y	Y	Y
GSP per Capita	-	-	-	Y	Y	Y	Y	Y
Sex	-	-	-	-	Y	Y	Y	Y
Race	-	-	-	-	-	Y	Y	Y
Industry	-	-	-	-	-	-	Y	Y
State trends	-	-	-	-	-	-	-	Y

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
All specifications include state level fixed effects.

Table 4.4. Impact of Payday Loan Law Changes on Bankruptcy Filings Per Capita (Excl.)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Banned	-35.575	-35.062	-29.448	-28.819	-26.659	-34.550*	-47.560***	-41.037***
Medical Expenses	-	Y	Y	Y	Y	Y	Y	Y
Percent Employed	-	-	Y	Y	Y	Y	Y	Y
GSP per Capita	-	-	-	Y	Y	Y	Y	Y
Sex	-	-	-	-	Y	Y	Y	Y
Race	-	-	-	-	-	Y	Y	Y
Industry	-	-	-	-	-	-	Y	Y
State trends	-	-	-	-	-	-	-	Y

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
All specifications include state level fixed effects. Excludes Alabama, Arkansas, and Oklahoma due to unclear nature of payday loan legality in those states during 1997-2015.

CHAPTER FIVE

Discussion

Banning payday loans decreases personal bankruptcy filings per 100,000 people by about 60, a 15.7% decrease from the 382 average filings per 100,000 for 1996-2015. Since bankruptcy is the ultimate sign of financial distress, my results only capture the worst effects of payday lending on consumers. It is likely that many more individuals are caused substantial financial distress by payday loans, but are not driven all the way to bankruptcy.

My findings are at odds with the argument that payday loans offer customers a credit lifeline in times of financial hardship.[1 2] If payday loans are truly a needed and beneficial credit lifeline, then a ban on payday lending should increase the number of bankruptcy filings per 100,000 persons. A limit to the credit access of financially distressed individuals should increase their level of financial distress and accelerate the path to bankruptcy. But instead, and consistent with the findings of Morgan, Strain, and Seblani and Skiba and Tobacman, I find that access to payday lending increases the probability of bankruptcy.[3 4]

A likely explanation is given by Skiba and Tobacman that "First-time payday loan approval causes significant additional high-interest-rate borrowing, and the consequent interest burden may worsen household cash flow sufficiently to induce

1. Morse, "Payday lenders: Heroes or villains?"

2. Lawrence and Elliehausen, "A Comparative Analysis of Payday Loan Customers."

3. Morgan, Strain, and Seblani, "How payday credit access affects overdrafts and other outcomes."

4. Skiba and Tobacman, "Do Payday Loans Cause Bankruptcy?"

bankruptcy."[5] Campbell, Martínez-Jerez, and Tufano add that "the presence of this high-cost, short-term credit adds to the over-extension of household budgets, and exacerbates the rate at which households overdraw their accounts."[6] Skiba and Tobacman show that payday loan access leads to a "near-doubling of the annual bankruptcy rate."[7] The high interest rate due on payday loans coupled with the fact that payday loans are due all at once leads to bankruptcy and involuntary bank account closure. Payday loans lead to further high-interest rate borrowing — a cycle of debt.[8]

It appears that payday lenders are very aware of this cycle of debt and actually use the concept as the foundation of their business model: "The theory in the business is you've got to get that customer in, work to turn him into a repetitive customer, long-term customer, because that's really where the profitability is."—Cash America CEO Daniel Feehan.[9] "[C]onsumers mostly either roll over or default, very few actually repay their loans in cash on the due date."—Consumer Financial Services Association (payday lender trade association) lawyer Hilary Miller in a private email in 2015.[10] Miller is the same man that testified in front of congress in 2006 on behalf of the CFSA that "In the case of payday loans, the cost of credit, standing alone, is neither 'unfair' nor 'abusive,' even though the interest rates on such loans (expressed as an annual rate) are nearly universally in the triple digits."[11] Is it truly not abusive or unfair to market a high APR loan as a short-term solution when you know that a

5. Skiba and Tobacman, "Do Payday Loans Cause Bankruptcy?"

6. Campbell, Martínez-Jerez, and Tufano, "Bouncing out of the banking system: An empirical analysis of involuntary bank account closures."

7. Skiba and Tobacman, "Do Payday Loans Cause Bankruptcy?"

8. Ibid.

9. *Board of Directors.*

10. *Consumer Credit Research Foundation: Funding (and Editing!) Supposedly Independent Academic Payday Lending Research.*

11. Ibid.

majority of customers will not be able to pay? Especially when you would not make a profit if they were actually able to pay?[12]

Further, is it not even more offensive that many of these customers seem financially illiterate? Bertrand and Morse shows that potential customers more fully-informed of the additive nature of payday loan fees are 11% less likely to pursue a payday loan.[13] Agarwal, Skiba, and Tobacman find that most (two thirds) payday loan customers from one lender had $1,000 worth of credit card liquidity available yet chose to take out a payday loan.[14] Using a credit card instead of a payday loan would save these individuals $300.[15] Assuming 11 million annual customers, this amounts to $2.2 billion wasted annually.[16]

What then, is the solution? Skiba suggest that an outright ban on payday lending is unnecessary and that curbing rollovers is the optimal solution.[17] However, a renewal is equivalent to a rollover so payday lenders can continue to operate in the same manner. In fact, earlier in this paper I demonstrate the way in which payday lenders flaunt loopholes in the law on page 13. Graves argue in favor of outright bans in the form of the strict enforcement of usury laws.[18] The Department of

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12. DeYoung and Phillips, *Payday Loan Pricing.*

13. Bertrand and Morse, "Information disclosure, cognitive biases, and payday borrowing."

14. Agarwal, Skiba, and Tobacman, "Payday Loans and Credit Cards: New Liquidity and Credit Scoring Puzzles?"

15. Ibid.

16. Robert DeYoung et al., *Reframing the Debate about Payday Lending*, technical report (Federal Reserve Bank of New York, October 2015), http://archive.is/zNPDZ.

17. Skiba, "Regulation of Payday Loans: Misguided?"

18. Graves, "Predatory Lending and the Military: The Law and Geography of Payday Loans in Military Towns."

Defense agreed and set a "36% APR cap on loans to servicemen."[19] Carrell and Zinman also present data in favor of the 36% cap set by the DoD. I agree with Graves, Carrell and Zinman, and the DoD: payday loans should be outlawed by strict enforcement of a 36% usury rate. Anything less will be exploited by an industry with a documented history of flaunting the law.

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19. Carrell and Zinman, "In Harm's Way? Payday Loan Access and Military Personnel Performance."

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