Minor Bank Account Laws, Account Ownership, and Downstream Outcomes

J. Michael Collins
Associate Professor of Consumer Finance and Public Affairs
University of Wisconsin-Madison

Carly Urban
Associate Professor of Economics
Montana State University

January 24, 2019

Abstract

Policymakers often focus on increasing the number of individuals participating in the formal banking sector as a policy goal, with recent discussions on increasing participation among the young. One policy lever states have employed over time are statutes allowing minors have non-custodial checking or savings accounts. This paper uses the differential timing of state minor bank account laws to estimate a difference-in-difference model of account access on later-in-life financial behaviors. We find that the laws increase the likelihood that individuals under 20 hold accounts, though this average effect decreases as individuals age. In addition to an increase in account participation, individuals are less likely to use alternative financial services, including payday loans, pawn shops, auto title loans, and other short-term high-interest financing methods. We find that our effects are most pronounced and persistent for individuals who never attend college, where parent financial literacy may be lowest and employment may drive the demand for accounts. Finally, we show that there is no clear supply response: the presence of state- and federally- chartered banks do not substantively change as a result of the policy. A back of the envelope calculation suggests that if all states without policies were to implement minor account laws, an additional 150,000 18-25 year olds would be fully banked and roughly 100,000 fewer 18-25 year olds would use alternative financial services.

1

1 Motivation

Financial inclusion is a common goal of financial innovations and public policies globally, with the aim of expanding the market for banking services to currently underserved people (Célérier and Matray, 2015; Demirgüç-Kunt and Klapper, 2013). Typically financial inclusion refers to people in developing economies with emerging financial services gaining access to basic savings and credit products. But even within well-developed economies, there are some consumers who are slow to adopt financial services or remain under- or unbanked for much of their lives (Rhine et al., 2006). Access to financial services may be especially important for young people entering the workforce and becoming active in economic activity for the first time (Johnson and Sherraden, 2007; Grinstein-Weiss et al., 2010).

The importance of bank account access for young people may go beyond economic motivations or demand for financial services. Owning and using a bank account is one way that young people can learn financial literacy. In fact, experiential learning may help develop financial capability in ways that benefit young people, as well as society more broadly. Choi (2009) finds that bank account ownership among high school seniors is associated with higher levels of financial knowledge, even after controlling for factors such as race and parental education. Lahav et al. (2018) show that young people with an account have greater financial literacy, especially among girls who have a bank account. Access to banking services in these formative years has the potential to improve consumer financial wellbeing later in life (Brown et al., 2018).

Low-balance accounts for first-time banking customers have their costs, however, for both financial institutions and consumers (Porteous, 2015). These costs maybe justified if the gains to consumers and society from greater financial capability are significant. Many of the existing evidence associating access to bank accounts for youth with financial literacy or capability are not causally identified, creating uncertainty around the efficacy of promoting youth banking services. The role of bank accounts for youth is important for industry, policymakers and regulators to understand.

This project explores how non-custodial bank accounts for minors affect financial behaviors later in life. We recognize that those minors with more affluent and more motivated parents are more likely to both have bank accounts and make better financial decisions. We address this potential bias by using an exogenous indicator for differences in state laws that regulate access to bank account ownership for minors in some areas and time periods, and not others. Using a difference-in-difference strategy and data

from the FDIC's Un(under) Banked Survey from 2009-2017, we estimate the causal effect of account access at young ages on being fully banked, meaning having a checking or savings account and not using alternative financial services, later in life.

Many financial institutions adhere to the federal policy that stipulates that only individuals age 18 or older can own bank accounts, and minors must have a custodial account with parents or guardians as co-owners until they turn 18. However, some states have passed legislation that allows minors to independently-owned accounts prior to age 18 (usually near age 15) while others have not. Importantly for this research design, we can use variations in state regulations to estimate changes in access to accounts for minors, and subsequently, study the impacts of youth account ownership on account access later in life.

We posit three main channels for bank account ownership at a young age to affect financial capability in adulthood. First, having an account at a young age is a complement to earnings and employment at a younger age. This labor market activity could accelerate young people's learning, capability, and earnings.

Second, a non-custodial minor account puts the onus on the individual, as opposed to his or her parent, to manage money, creating opportunities for young people to make mistakes and learn. For example, after experiencing an overdraft fee, the minor may learn the importance of checking balances and paying bills on time. Unlike co-owned or custodial accounts, there is no parent or guardian on the account to protect the minor from mistakes. This experiential learning could enhance financial capability and positive outcomes later in life.

Third, to the extent that minors have a positive first experience with the formal banking sectors, these consumers of financial services may have stronger trust in financial institutions. Whereas youth with custodial accounts cannot prevent the co-owner parent or guardian from accessing their accounts, minor owned accounts create a more direct relationship between the youth and the account provider. This enhanced trust in financial services providers at a young age may create a pattern of behavior that is maintained with expanded use of formal financial products, providing enhanced access and use of financial products that offer both leverage and liquidity later in life.

Expanding access to financial services to minors is a different policy strategy than restricting or regulating products and services that consumers who lack financial capability may struggle to manage, such as payday loans. By allowing consumers to gain experiences early in life, learning-by-doing, they

may be better prepared to manage liquidity, plan for shortfalls, and use financial products to smooth consumption.

This study is motivated by two primary questions: (1) Do minor account laws increase the likelihood individuals are banked later in life? (2) Does greater access to noncustodial transaction accounts at young ages change financial behaviors, such as the use of alternative financial services, later in life? While others have demonstrated a relationship between youth accounts and financial behaviors and knowledge, the results can be driven by selection into bank accounts via intergenerational transfers of economic status, youth employment, or other factors correlated with both bank account ownership and financial literacy. This is the first paper to determine the causal effect of minor account ownership on financial outcomes.

The findings show that minor account laws increase the likelihood an individual is banked by age 20, but this effect decreases and hits zero by age 29. These results suggest that while there is a temporary boost to the likelihood of being fully banked, these accounts are not persistent and the control group eventually catches up with the treatment group. Further, the bulk of the increase in accounts comes from young adults who do not attend college. For that group, the effect persists to those in their mid-20s, possibly suggesting that the demand for accounts is greater for those who are employed early in life.

In addition to our demand-side analysis, we explore the change in supply of banks. Since only state-chartered banks offer the minor accounts, we use an event-study difference-in-difference specification to determine if the passage of minor account laws changes the presence of state-chartered banks per capita and subsequently the presence of federally-chartered banks per capita in a given zip code. We find no evidence to suggest that the policy substantively changes the supply of state- or federally- chartered banks in an area.

This paper begins with a review of prior studies, followed by an overview of regulations of custodial accounts, the data used for this analysis and estimates of how changes in state laws affect access to non-custodial bank accounts for people under age 18. We conclude with a summary discussion and implications for policymakers and for the financial industry broadly.

2   Literature Review

The topic of transaction-focused bank accounts for minors is relatively sparse, although the broader literature on youth financial literacy, financial capability and financial inclusion is quite expansive. We focus

our attention to studies that examine factors associated with people under age 18 having a transactional account, drawing on other literature to the extent it informs our priors and approach.

2.1 Financial Regulation of Accounts

The regulation of banks and credit unions in the United States has roots in the history of financial development, with some chartered at the national level, and some at the state level.[1] The result is that financial institutions operating in the same market may have different regulators and have to adhere to different rules (VanHoose, 2017). For example, the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 removed several obstacles to banks opening branches in other states and provided a uniform set of rules regarding banking in each state. However, each state is left to implement regulations for state-chartered institutions. This is particular binding relative to regulations on the ability of minors to own a bank account (Wilder, 2006).

State and federal regulations have a direct effect on financial institution behavior (Rhine et al., 2006). The degree of regulation on a firm influences if it offers certain products, and to what customers. One recent analysis by Brown et al. (2018), related to regulations on Native American Indian lands, finds that young people with early access to financial institutions show better credit scores and increased the probability of having a credit file earlier in life. These estimates are specific to markets with profound constraints, and are not readily generalizable to other contexts. Another example of a prior study is by Washington (2006), finding that when states require banks offer low cost account options, this reduces the proportion of low-income minority unbanked households. Similarly, caps on check-cashing fees reduce the fraction of unbanked households. This work shows a general price sensitivity and demand for low-cost accounts, but it does not inform how access to bank accounts earlier in life affect behavior.

There is an array of legal and taxation issues for accounts related to children, including gift taxes, estate taxes, and income taxes–all rationales to regulate these accounts to deter tax avoidance (Wilder, 2006). There are also regulations to protect minors from having their assets abused by an adult, as well as to protect them from their own potentially uninformed decisions (Office of the Office of the Comptroller of the Currency, 2017). State-level statutes dictate whether or not teenagers under 18 years of age can

---

[1]FDIC Statistics on Depository Institutions Report as of 30 September 2018 shows 1159 total nationally chartered institutions with depository insurance, and 4318 state chartered institutions. Nationally chartered firms have about twice the assets of state chartered firms, however. At the same time, NCUA reports 5480 credit unions; of these 3608 have federal charters, with both types of charters holding roughly equal assets.

own an account without a co-signer. In the absence of state legislation, states adhere to the policy for nationally chartered institutions, which only allows accounts for minors using a joint account with a parent or guardian, or a custodial account. Joint accounts operate like a minor owned account, where the young person can make deposits and withdraws, but they are not independent owners, and the co-owner can also make deposits, withdraws or approve or not approve certain account actions. Custodial accounts are set up by an adult to be used for benefit of a minor, but an adult must make deposits and withdrawals until age 18 (or later depending on the state).

Our focus is on transaction accounts (also called 'checking' accounts, although few issue checks in recent years) to deposit funds, store cash and make payments. These are distinct from savings only, passbook accounts that just store cash for a modest rate of interest. These are also distinct from college savings or child savings accounts used in asset building programs to save for a specific, restricted purpose (Sherraden et al., 2013, 2007; Johnson and Sherraden, 2007; Grinstein-Weiss et al., 2010). Research provides some suggestive evidence that these college savings accounts are one strategy to build assets for a specific purpose, especially when implemented in schools; however, these are focused on custodial accounts for very specific forms of savings. Transaction accounts are less studied, but they are perhaps more practical and important for a young person in terms of day-to-day financial management.

2.2   The Market for Youth Accounts

Three decades ago, Lewis studied (Lewis and Bingham, 1991; Lewis, 1982) the potential business model for banks of offering accounts to students and youth. This work is generally positive about these accounts as a financial product offering but mainly from the firm's broader perspective of seeking client engagement and retention. More recent work explores demand side factors that influence banking choices among youth (see the review in Tank and Tyler (2005)). One of the main drivers are parents having an account, as well as having a form of earnings. Porteous (2015) examines low balance transactions accounts in the developing economy context, but the features of this segment share features with youth accounts in developed economies–small balances, higher costs, and high turnover. Overall, the business case for these types of accounts is not strong on its own. Accounts for minors are not likely to generate much revenue and could incur costs to the financial institution. The use of partnerships and technology are making such accounts more viable, however, and perhaps offer some hope for the future economic viability of these

typically low-balance accounts (Porteous, 2015).

2.3   Positive Externalizes of Account Ownership for Financial Capability

The financial fragility of Americans is a growing concern: roughly one in three households report that they could not come up with $2,000 in the event of an emergency within the next month (FINRA Investor Education Foundation, 2016). In addition, roughly one in four individuals report using high cost non-bank borrowing, including payday loans, auto title loans, rent-to-own stores, and pawn shops. This trend is not just present in very low-income individuals.

These findings relate back to data showing that two out of three young adults lack basic financial literacy (Lusardi et al., 2010; Lusardi and Mitchell, 2014). This pattern of lacking basic financial knowledge becomes less pronounced as people age, suggesting some learning by experience (Walstad et al., 2017; Loke et al., 2015). One strategy to help consumers achieve greater financial wellbeing is to develop policies that encourage learning about financial management early in life and providing support for decisions that can improve later-in-life financial outcomes.

This finding offers some support for the idea that offering accounts to youth could have a public good aspect, if having an account improved financial literacy and decision making. For example, Choi (2009) shows associations between youth who have bank accounts also having higher levels of financial knowledge. Jamison et al. (2014) conducted an experiment in a developing economy context, offering three groups financial education only, financial education and account access, account access only. They find that financial account access has some positive effects, although there is also some evidence that accounts and education are complements. Batty et al. (2015) also conclude from a field study that financial education combined with bank account access offered in elementary school is beneficial for financial learning.

In a non-experimenal setting, Hogarth et al. (2004) find that people who reported more exposure to financial services as a youth are less likely to unbanked later in life. These patterns are shown in cross-sectional data from the Programme for International Student Assessment (PISA) study by the Organisation for Economic Co-operation and Development (OECD): youth with bank accounts show higher levels of measured financial literacy (Corporation, 2014; Jappelli, 2010).

One trigger for owning an account by youth is having a job with regular income (Erskine et al.,

2006). Working, earning, and saving all facilitate financial experiences and may help young people to develop financial capability; studies seem to consistently support that savings and learning are aided by access to financial services and basic bank accounts (Friedline and Elliott, 2013; Elliott and Friedline, 2013).

Of course, an alternative to expanded account access for youth is to simply teach more financial education to minors. Indeed, studies of formal financial education requirements in high school do show reduced credit delinquency rates in young adulthood (Urban et al., 2014). Education in high school on financial issues is also shown to reduce non-student debt (Brown et al., 2016) and improve financial aid decisions (Stoddard and Urban, 2017) for young adults. However, these courses only provide information. Experience with banking and accounts at a young age affects may combine with formal learning in a complementary way to lead to greater financial capability and economic self sufficiency.

2.4 Minor Bank Account Policy Predictions Based on Prior Evidence

The process of how people acquire financial knowledge is complex, ranging from peer norms and parental influences to formal education and learning by doing (Lusardi and Mitchell, 2014; Elliott and Friedline, 2013). Part of this mix of factors is clearly experiences with a bank account, especially in ages 15-18 as young people first start to earn income, engaged in transactions and manage cash flows. The distinctions between jointly-owned, custodial and independently owned account for minors has not been studied in the past. Yet, it seems likely that offering more opportunities for minors to engage in financial services will be supportive of financial learning and later life financial wellbeing and capability.

Based on this understanding, what would be the likely influence of a state changing its policy to make minor-owned bank accounts more accessible? First, at a minimum, firms now have the opportunity to respond by offering new forms of accounts they did not previously offer. This may be as simple as shifting new accounts for minors from joint or custodial accounts to minor owned accounts. Or, firms may create new transaction account products for this market. Firms may be motivated to offer youth accounts since bank accounts are 'sticky,' meaning these entry-level relationships with young customers could develop into long-run primary financial relationships. This could even stimulate growth in total assets among institutions or firms to open more branches, although this is a second order, and likely quite small, effect. More state-chartered banks may enter the market, and some firms may seek to convert to

state charters, although this is a rare event, generally. Other firms may not respond to the policy at all and not offer accounts to minors.

On the demand side, changes in state regulations might draw attention to the ability of young people to own bank accounts younger than at age 18. This might trigger more 15 to 17 year olds to prefer accounts that they own on their own, without a joint owner or custodian. The demand for accounts would likely be higher among those young people who are employed, as well as those who want to avoid meddling by a parent or guardian who demonstrates poor financial capability themselves.

Understanding how youth access to bank accounts improves financial outcomes is an important piece of evidence to better design policies, regulations and financial products that benefit firms, consumers and society more generally. If policies that expand access to minor bank accounts show positive effects on being banked and lower rates of financial problems, it would support greater financial inclusion for this target age group.

3   Data

Our empirical strategy relies upon two data sources: information on whether or not individuals are banked and the years in which minor account laws were passed by state.

We draw upon data from the FDIC Un(under) banked survey from 2009, 2011, 2013, 2015, and 2017. The data are collected in conjunction with the Current Population Survey (CPS) sample. These data include information on whether or not individuals within a household are banked using a standard checking or savings account, as well as whether or not they use alternative financial services, such as payday lending, pawn shops, auto title loans, etc.

Our main dependent variable of interest will be equal to one if the individual is fully banked, meaning he or she has a checking or savings account, and does not use alternative financial services (AFS), and zero otherwise. For the purpose of this study, we retain the observations that are 15, 16, and 17 year olds (403 observations). While there are not enough observations to estimate the first stage of minor account laws on minor accounts, these are precisely the individuals we want to include in estimating the effect of the policy.

Figure 1 shows the mean rate of being fully banked by age in the FDIC data. The rate begins at lower than half and evolves to nearly 65% by age 29. While there are clear increases over blocks of ages,

each individual age is not statistically different from the previous or subsequent age.

In each year, the FDIC data include information on why individuals report being unbanked, though some of the categories change across survey waves. We show these statistics in Table 1, where the most common reason across each survey year is that these respondents do not have enough money. In 2011, nearly a quarter of respondents report that they do not need or want an account. While this question is not repeated the same way in subsequent waves, the lack of trust in banks is a consistent third reason for not having an account for young adults. To that extent, minors with better early experiences may find they have greater trust in banks if they have positive earlier-in-life experiences.

We merge the FDIC data with minor account policies that we collect from state-level "minors alone" statutes, which describe whether or not teenagers under 18 years of age are legally allowed to hold an account without a co-signer. Again, these policies only pertain to state-chartered institutions, as federally-chartered firms abide by the federal law that minors cannot have a solo account.[2] We refer to these minor banking laws as MBLs for the remainder of the paper. In the absence of state legislation regarding minor accounts, states adhere to the national policy. For the most part, states allow for minor accounts beginning at age 15. While there are a few exceptions beginning at age 12 at the earliest, we operate under the assumption that states may still only enforce the policy beginning with age 15. If they offer accounts to teens below age 15, our estimates will be conservative. In the year the policy is enacted, we assign 15, 16, and 17 year olds living in that state to the "treatment" group.

In addition to minor account laws for state-chartered banks, each state has separate policies regarding state-chartered credit unions. We collect the start of these policies by state in the same fashion. Table 2 reports the year in which minors were first allowed to own accounts by state. Again, we assume that these policies first took effect for 15 year olds. Our identification strategy relies on the differential timing of minor account laws across states. Conditional on having a credit union policy, only three states passed minor account laws after 1998 (Illinois, Iowa, and Michigan). Since the FDIC data begin in 2009, this gives little power to estimate the effect of youth account laws on young people in the data. Because 16 states passed minor account laws after 2000, we focus on bank laws for this paper. However, we are careful to control for credit union policies throughout our analysis.

We map the evolution of minor bank account laws in Figure **??**. Since recent work by Goodman-

---

[2]Some banks and credit unions have state and national charters (dual charter). In these cases, states where minor accounts are not permitted still cannot offer minor accounts.

Table 1: Why young adults (≤ 29) report being unbanked?

Main reason unbanked	Percent
2011	
Do not have enough money	25.62
Do not need or want an account	23.44
Do not like dealing with or do not trust banks	10.19
ID, credit, or banking history problems	7.57
Previously had an account but the bank closed it	8.01
Fees or minimum balances are too high or unpredictable	5.82
Inconvenient hours or locations	1.75
Do not know how to open or manage an account	1.46
Banks do not offer the needed products	0.58
Other or unknown reason	15.57
2013	
Do not have enough money	28.04
Do not like dealing with or do not trust banks	17.68
Account fees too high or unpredictable	15.18
ID, credit, or banking history problems	8.39
Not using bank provides more privacy	5.18
Inconvenient hours or locations	2.68
Banks do not offer needed products or services	1.61
Other or unknown reason	23.30
2015, 2017	
Do not have enough money	32.39
Do not trust banks	13.70
Account fees too high	10.37
ID, credit, or former bank account problems	5.76
Inconvenient hours	3.97
Avoiding bank gives more privacy	3.33
Account fees unpredictable	2.30
Banks do not offer needed products or services	2.18
Inconvenient locations	2.18
Other or unknown reasons	23.82

Bacon (2018) shows that difference-in-difference estimators are biased when treatment effects evolve over time, we use only states that have no policy in the entire period as our control group as our main specification.

Table 3 shows means and standard deviations of our sample across states that pass MBLs during our sample period and those that never pass MBLs for individuals 25 years of age or younger. None of the summary statistics seem to be substantially different across groups in any meaningful way. Roughly 60% of the sample is fully banked, and roughly 10% are unbanked, meaning they have no savings or checking

account. Note that AFS use variable is not available in all years, so the numbers do not perfectly sum to one. Overall, 18% of the sample is part of a married couple, 30% is an unmarried household with more members within the household, another 50% represent households with single males or females, and the remaining have other household structures.

4   Empirical Strategy

We use a difference-in-difference strategy to identify the effect of MBLs on account ownership. Our main dependent variable (Y) will equal one if the individual is fully banked and zero otherwise. We estimate Equation 1 using a linear probability model (LPM), which is preferred to a logit or probit when including large sets of dummy variables.

$$Y_{i,s,y,t} = \alpha_0 + \alpha_1 MBL_{s,y} + \alpha_2 X_i + + \alpha_3 u_{s,y} + \alpha_4 CULaw_{s,y} + \beta_t + \gamma_s + \delta_y + \varepsilon_{i,s,y,t} \tag{1}$$

The main coefficient of interest in Equation 1 is the difference-in-difference parameter, α_1, which captures the causal effect of MBLs on whether or not individual i in state s born in year y and responding in survey year t is fully banked. We control for three individual-level demographic characteristics X_i that are not potential outcomes of the policy: race/ethnicity and household type (married couple, unmarried female head, unmarried male head, female individual, male individual, other). The model further includes the state unemployment rate at the time the individual was 15, whether or not the individual was exposed to a credit union minor account law, survey year fixed effects, state fixed effects, and birth year fixed effects. $\varepsilon_{i,s,y,t}$ is the error term, and we provide robust standard errors clustered at the state level to account for both heteroskedastic standard errors and the fact that policies are set at the state level.

We choose to estimate Equation 1 by age to see if the effects deteriorate over time. We begin with a sample of those that are 20 or under, and we add an additional age to the sample and re-estimate the regression through age 30. We do this, as opposed to running the regression by each age band, to retain power in the sample. This way, if the effects deteriorate or amplify over time, we will average in the short-run effects in determining the long-run effects to determine a cumulative effect of the policy.

We are careful to estimate effects based on policies that have a pre- and post-period. For example, our first survey year is 2009, and the first cohort that would be affected would be age 15 in 2004. Thus,

we only include policies that began 2004 or later. We continue that same pattern as we include additional ages.

Table 4 attempts to use state characteristics to predict the take-up of MBLs. This model includes data from the University of Kentucky Poverty Center from 1980-2015, annual federal and state credit union membership data from the National Credit Union Foundation, and state and year fixed effects. We cluster standard errors at the state level. The only variable that is statistically different from zero at the 10% level is state gross product, where an additional $1 billion increases the likelihood of passing the policy by 0.1 percentage points. This marginal effect is quite small.

Difference-in-difference specifications require that the treatment and control groups are parallel in the pre-policy period and the treatment group would have trended similarly to the control group in the absence of the policy. Table 5 shows the trends in the pre-period across the treatment and control group for those 20 or under, 25 or under, and 29 or under. We include more pre-periods as we increase the sample size and number of ages in each column. In Columns (1) and (2) there are no clear trends when compared to the cohort barely unaffected by the policy (those 18 when the policy was enacted). In Column (3), there appears to be one effect statistically different from zero at the 95% level three years before the policy took effect. For this reason, we are careful to also include robustness checks with state linear and quadratic trends based on the year an individual turned 15 in Table 6. All of our results are robust to these specifications. We further provide a placebo test in Table **??**.

5 Results

Figure 3 plots the α_1 coefficient from Equation 1 by age for the full sample, along with the 95% confidence interval for the estimate. MBLs increase the likelihood an individual is fully banked by 18 percentage points for those under age 20. This suggests that the policy increases the likelihood individuals have bank accounts in the short-run. However, this effect dissipates over time and is estimated as a precise null effect by age 27.

By comparison, Figure 4 plots the estimated effect of a change in the state unemployment rate at the time the individual was 15 on whether or not he/she is fully banked (α_3 in Equation 1) to approximate access to labor markets for youth. For those 20 and under, a one unit decrease in the unemployment rate increases the likelihood an individual is fully banked by roughly 2.5 percentage points, though this is not

13

statistically different from zero at the 95% level. This effect also disappears as individuals age.

We next investigate whether or not the effect of MBLs on account ownership is a function of increased employment. Figure 5 shows that MBLs increase the likelihood an individual is employed by roughly 8 percentage points, though this is not statistically different from zero at the 95% level. This shows some suggestive evidence that individuals may be more likely to work due to the policy, as they can now hold their own accounts without parental co-signers. This allows individuals to be the sole person in charge of their finances.

Is the effect coming from individuals less likely to be unbanked (meaning no checking or savings accounts) or AFS use? Figure 6 and Figure 7 show that MBLs *decrease* the likelihood that young adults are unbanked and also *decrease* the likelihood that young adults use AFS. The decrease in the likelihood of being unbanked is present for those 20 and under, suggesting that the laws encourage account ownership for younger people, as intended. The decrease in the likelihood of using AFS suggests that young adults are substituting from AFS to traditional methods of banking. These effects appear to persist for people through their mid-20s. This could suggest that individuals are learning from having early experience with an account and are then less likely to use AFS as they age.

5.1   Heterogeneity

We next explore for whom MBLs affect bank account-related outcomes. We specifically focus on two characteristics: education and urbanicity.

Figure 8 splits the sample by whether or not the individual has attended any college. These results suggest that the entire effect comes from individuals who do *not* attend college. Since those not attending college are likely to be the population with the greatest potential for earnings to save, it is not surprising that they are most likely to take up and continue to hold bank accounts. However, it is surprising that the effect now persists beyond age 20. While the effect decreases over time, it persists to roughly age 27. Like in the average effect, the long run decrease is largely from a decrease in AFS use (Figure 9).

Since rural areas are likely to house more community banks with state charters, we next investigate the differential effects of MBLs on being fully banked in rural versus urban areas. Figure 10 shows that the effect also persists for those who live in rural areas. While there is a short-run increase in being fully banked for those in urban areas, this does not persist beyond age 20 and is not statistically different from

zero. While this could be due to the thinner supply of state-chartered banks in rural areas, it could also be that in rural areas bankers are more likely to be familiar with teens in the area and know their employers and families, making them more likely to trust that these youth can open and account responsibly.

5.2 Placebo

To ensure that our effect is not driven by spurious events that occur in the state at the time of passage, we show that the policy does not affect those 30 and older and the time of passage Figure 11 using the exact same specification as in Equation 1. Here, we see that older cohorts did not change the likelihood of being banked due to the policy.

5.3 Other Potential Behaviors

Finally, we explore the degree to which other financial behaviors are affected by the MBLs. We employ data from the U.S. Department of Education's National Center for Education Statistics (NCES) on the number of Free Applications for Student Aid (FAFSAs) by state and year. We choose the FAFSA data since for those going to college, filling out the FAFSA is generally thought to be a positive financial decision. Eligible people who do not apply for aid are foregoing often significant financial benefits. We use a state panel difference-in-difference specification to estimate FAFSA applications per capita for the relevant age range. Table 7 shows that there is no effect of banking regulations on this behavior. This is likely due to the fact that the bulk of our first stage effect of MBLs on account ownership are from those who do not attend college.

6 Supply Responses

In this section, we show that there is no clear response by banks to the MBLs. We use data from the FDIC on state and federally chartered bank locations by zip code from 1994-2017 to determine how MBLs affect the presence of state and federally chartered banks. We then use these data and an event-study style difference-in-difference specification to determine whether or not the policies affect entry or exit of state-chartered banks per capita in the market.

Specifically, we estimate Equation 2, omitting the year just before the policy takes effect (t-1) and

clustering standard errors at the state level. We include zip code- and year- level fixed effects. $Y_{z,s,t}$ is the number of state (federal) banks in a given zip code z in year y within state s. We continue to control for the presence of a state credit union minor account law. α_{-10} and α_{10} contain all preceding periods and periods post, respectively. For reference, the average state and federally chartered banks per capita are 0.93 and 0.72 banks per 1,000 people.

$$Y_{z,s,t} = \alpha_0 + \sum_{i=-10}^{10} \alpha_i MBL_{s,t} + \gamma_1 CULaw_{s,t} + \beta_t + \delta_z + \varepsilon_{z,s,t} \qquad (2)$$

The two panels of Figure 12 display the event study figures for state and federal chartered banks per capita with 90% confidence intervals. While there appears to be somewhat of an increase in both state-chartered and federally-chartered banks in the long-run, there are no statistical differences at the 90% level and there are no statistical differences from the pre-period estimates. While these estimates are noisy, there is no clear supply-side response by firms to changes in state laws.

7 Conclusions

Overall, we see a pattern of states changing to policies to make minor-owned bank accounts more accessible is associated with people being more likely to be banked and less likely to use high cost financial services. These estimates are based on comparisons over time within and between states, and are robust to added controls and other tests. The effects appear to be driven by younger people owning accounts at younger ages, and especially those who are not college bound. These young people, since they are not targeting post-secondary education, are likely working, earning income and using their accounts to manage their finances earlier in life than similar young people in states without minor banking services. We cannot observe if this is a shift from joint or custodial accounts to minor owned accounts, or a general increase in all types of account use, however. The continued use of bank accounts is consistent with banking relationships being 'sticky'; due to trust factors, or transaction costs, young customers in states with minor accounts have accounts at higher rates. We cannot measure if this equates into brand loyalty or greater use of other financial products at these firms, but it does appear these young people in states with minor bank accounts are less likely to use non-bank financial products.

The trend of high school only education level people responding to the availability to minor accounts

could also be consistent with these young people begin from families where parents have lower levels of education, who want to co-owning an account with a parent or guardian who is not financially literate.

Our estimates imply that due to the MBLs, those 18-25 are 6 percentage points more likely to be fully banked. The average rate of being fully banked for those in non-MBL states was 62.7 percent. If the state governments of the remaining XX states (and the District of Columbia) without policies were to change the law such that minors could have accounts in state-chartered banks, this would result in an additional 150,000 18-25 year olds (or 260,000 15-25 year olds) being banked. Roughly 100,000 fewer 18-25 year olds (or 175,000 15-25 year olds) would participate in alternative financial services due to the policy change.

These are relatively low-cost policies for society, yet may produce positive externalities in terms of greater economic engagement and fewer financial problems. Policies that expand access to minor bank accounts may be worth encouraging as a means to greater financial inclusion for young people in general.

References

Batty, M., Collins, J. M., and Odders-White, E. (2015). Experimental evidence on the effects of financial education on elementary school students' knowledge, behavior, and attitudes. *Journal of Consumer Affairs*, 49(1):69–96.

Brown, J. R., Cookson, J. A., and Heimer, R. Z. (2018). Growing up without finance. *Journal of Financial Economics*, Forthcoming.

Brown, M., Grigsby, J., van der Klaauw, W., Wen, J., and Zafar, B. (2016). Financial education and the debt behavior of the young. *Review of Financial Studies*, 29(9).

Célérier, C. and Matray, A. (2015). Unbanked households: Evidence of supply-side factors. Technical report, working paper.

Choi, L. (2009). Bank accounts and youth financial knowledge: connecting experience and education. Working paper 2009-07, The Federal Reserve Bank of San Francisco.

Corporation, F. D. I. (2014). 2013 fdic national survey of unbanked and underbanked households.

Demirgüç-Kunt, A. and Klapper, L. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings Papers on Economic Activity*, 2013(1):279–340.

Elliott, W. and Friedline, T. (2013). "you pay your share, we'll pay our share": The college cost burden and the role of race, income, and college assets. *Economics of Education Review*, 33:134–153.

Erskine, M., Kier, C., Leung, A., and Sproule, R. (2006). Peer crowds, work experience, and financial saving behaviour of young canadians. *Journal of Economic Psychology*, 27(2):262–284.

FINRA Investor Education Foundation (2016). Financial capability in the united states-report of findings from the 2015 national financial capability study. July.

Friedline, T. and Elliott, W. (2013). Connections with banking institutions and diverse asset portfolios in young adulthood: Children as potential future investors. *Children and Youth Services Review*, 35(6):994–1006.

Goodman-Bacon, A. (2018). Difference-in-differences with variation in treatment timing. *Working Paper*.

Grinstein-Weiss, M., Yeo, Y. H., Despard, M. R., Casalotti, A. M., and Zhan, M. (2010). Does prior banking experience matter? differences of the banked and unbanked in individual development accounts. *Journal of Family and Economic Issues*, 31(2):212–227.

Hogarth, J. M., Anguelov, C. E., and Lee, J. (2004). Why don't households have a checking account? *Journal of Consumer Affairs*, 38(1):1–34.

Jamison, J. C., Karlan, D., and Zinman, J. (2014). Financial education and access to savings accounts: Complements or substitutes? evidence from ugandan youth clubs. Technical report, National Bureau of Economic Research.

Jappelli, T. (2010). Economic literacy: An international comparison. *The Economic Journal*, 120(548):F429–F451.

Johnson, E. and Sherraden, M. S. (2007). From financial literacy to financial capability smong youth. *J. Soc. & Soc. Welfare*, 34:119.

Lahav, E., Shavit, T., and Benzion, U. (2018). Don't let them fool you: Adolescents' present-orientation and inferior financial understanding. *Young*, 26(3):271–289.

Lewis, B. R. (1982). Student accounts—a profitable segment? *European Journal of Marketing*, 16(3):63–72.

Lewis, B. R. and Bingham, G. H. (1991). The youth market for financial services. *International Journal of Bank Marketing*, 9(2):3–11.

Loke, V., Choi, L., and Libby, M. (2015). Increasing youth financial capability: An evaluation of the mypath savings initiative. *Journal of Consumer Affairs*, 49(1):97–126.

Lusardi, A. and Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1):5–44.

Lusardi, A., Mitchell, O. S., and Curto, V. (2010). Financial literacy among the young. *Journal of Consumer Affairs*, 44(2):358–380.

Office of the Office of the Comptroller of the Currency (2017). School-based bank savings programs: Bringing financial education to students. *Community Developments*, pages 1–10.

Porteous, D. (2015). Low-balance bank accounts—part 1: Is there a pathway towards profitability? *Journal of Payments Strategy & Systems*, 9(3):305–310.

Rhine, S. L., Greene, W. H., and Toussaint-Comeau, M. (2006). The importance of check-cashing businesses to the unbanked: Racial/ethnic differences. *Review of Economics and Statistics*, 88(1):146–157.

Sherraden, M., Peters, C., Wagner, K., Guo, B., and Clancy, M. (2013). Contributions of qualitative research to understanding savings for children and youth. *Economics of Education Review*, 32:66–77.

Sherraden, M. S., Johnson, L., Elliott III, W., Porterfield, S., and Rainford, W. (2007). School-based children's saving accounts for college: The i can save program. *Children and Youth Services Review*, 29(3):294–312.

Stoddard, C. and Urban, C. (2017). The effects of financial education on student financial aid choices. *Working Paper*.

Tank, J. and Tyler, K. (2005). Uk student banking revisited: influences and the decision-making process. *Journal of financial services marketing*, 10(2):152–164.

Urban, C., Schmeiser, M. D., Collins, J. M., and Brown, A. (2014). State mandated financial education and the credit behavior of young adults. *The Federal Reserve Board: Finance and Economics Discussion Series*, 2014-68.

VanHoose, D. (2017). Regulation and the structure of the banking industry. In *The Industrial Organization of Banking*, pages 243–280. Springer.

Walstad, W., Urban, C., J. Asarta, C., Breitbach, E., Bosshardt, W., Heath, J., O'Neill, B., Wagner, J., and Xiao, J. J. (2017). Perspectives on evaluation in financial education: Landscape, issues, and studies. *The Journal of Economic Education*, 48(2):93–112.

Washington, E. (2006). The impact of banking and fringe banking regulation on the number of unbanked americans. *Journal of Human Resources*, 41(4):106–137.

Wilder, J. R. (2006). Spending the children's money: A critical look at custodial accounts. *Journal of the American Academy of Matrimonial Lawyers*, 20:127.

8 Tables and Figures

Figure 1: Banked by Age
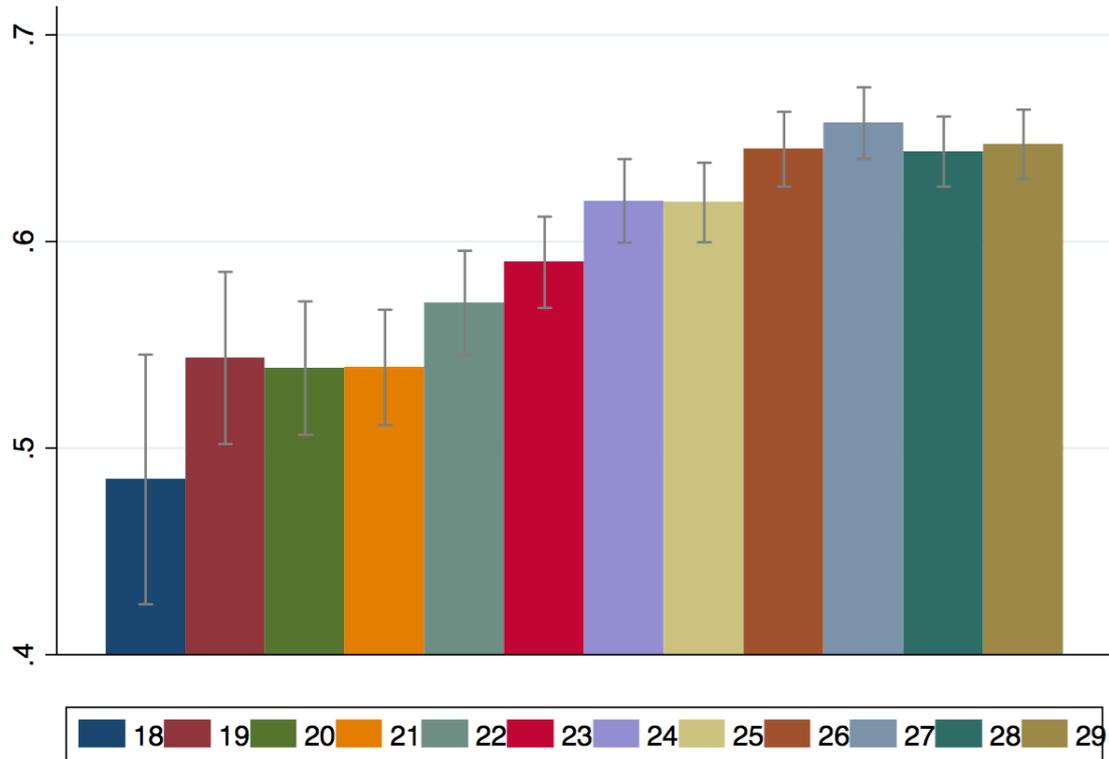
Notes: Data from the FDIC Unbanked/Underbanked Survey 2009-2017. 95% confidence intervals for each mean represented in the error bars. Banked=1 if the individual is fully banked and zero otherwise.

Table 2: State Minor Account Credit Union and Banking Laws

State	Bank Law	Credit Union Law	State	Bank Law	Credit Union Law
AL	1980	1927	MT	1977	1975
AK	1993	1980	NE		1996
AZ	1973	1990	NV	1999	1975
AR	1997	1947	NH	2015	1965
CA	2012	1983	NJ	1948	1984
CO	2003	1963	NM	1963	1987
CT	1995		NY	2002	1996
DE	1953		NC	2012	
DC			ND	2009	1935
FL	1997		OH	1997	1987
GA	2017	1974	OK	2000	1941
HI	1993	1993	OR	2015	1999
ID		1977	PA		1933
IL	1965	2012	RI	1995	
IN		1977	SC	1985	1996
IA	2002	2007	SD	1969	
KS	2015	1929	TN	1969	1923
KY	2006	1984	TX	1997	1997
LA	1985	1950	UT	1996	
ME	2007		VT	2001	
MD	1980		VA	2010	1950
MA	2014		WA	1981	
MI	1909	2004	WV	1969	
MN	1985	1925	WI		1971
MS	1942	1972	WY	1977	
MO	1967	1959			

Notes: Year marks the year the laws were passed to allow for solo minor accounts.

Table 3: Summary statistics across states with and without policies for those 25 and under

	No MBL	MBL	Total
Fully banked	0.627	0.593	0.604
	(0.484)	(0.491)	(0.489)
Unbanked	0.095	0.122	0.113
	(0.293)	(0.327)	(0.317)
Underbanked	0.274	0.278	0.277
	(0.446)	(0.448)	(0.448)
Used AFS	0.424	0.464	0.451
	(0.494)	(0.499)	(0.498)
	1103	2350	3453
Married couple	0.157	0.190	0.180
	(0.364)	(0.392)	(0.384)
Unmarried female-headed family	0.166	0.199	0.189
	(0.372)	(0.399)	(0.391)
Unmarried male-headed family	0.100	0.136	0.125
	(0.300)	(0.343)	(0.330)
Female individual	0.263	0.218	0.232
	(0.440)	(0.413)	(0.422)
Male individual	0.309	0.248	0.267
	(0.462)	(0.432)	(0.442)
Black	0.139	0.126	0.130
	(0.346)	(0.332)	(0.336)
Hispanic	0.104	0.191	0.164
	(0.305)	(0.393)	(0.370)
Asian	0.041	0.065	0.058
	(0.198)	(0.247)	(0.233)
White	0.709	0.596	0.631
	(0.454)	(0.491)	(0.483)
Age	22.72	22.49	22.57
	(2.056)	(2.186)	(2.149)
Observations	1,745	3,888	5,633

Table 4: Predicting Laws

Dependent Variable=1 if MBL was passed in given year

Financial Education Requirement	-0.00317	(0.059)
Governor is Democrat	-0.03390	(0.032)
Unemployment rate	0.00376	(0.020)
State Credit Union Members Per Capita	0.50434	(0.687)
Federal Credit Union Members Per Capita	0.37759	(0.647)
Number of banks per 100,000 people	-0.00024	(0.000)
Medicaid Beneficiaries per 100,000 people	-0.01185	(0.007)
SSI Beneficiaries per 100,000 people	-0.22458	(0.174)
Gross State Product (in 100 millions)	0.00011*	(0.00049)
Food Stamp Beneficiaries per 100,000 people	0.00122	(0.011)
Poverty Rate	0.00146	(0.006)
Population (in millions)	0.02961	(0.067)
Observations	1,030	

Notes: Robust standard errors clustered at the state-level in parentheses. Data from the National Credit Union Foundation and the University of Kentucky Poverty Center. Years include 1980-2015.

Figure 2: Minor Account Laws: Identification Strategy
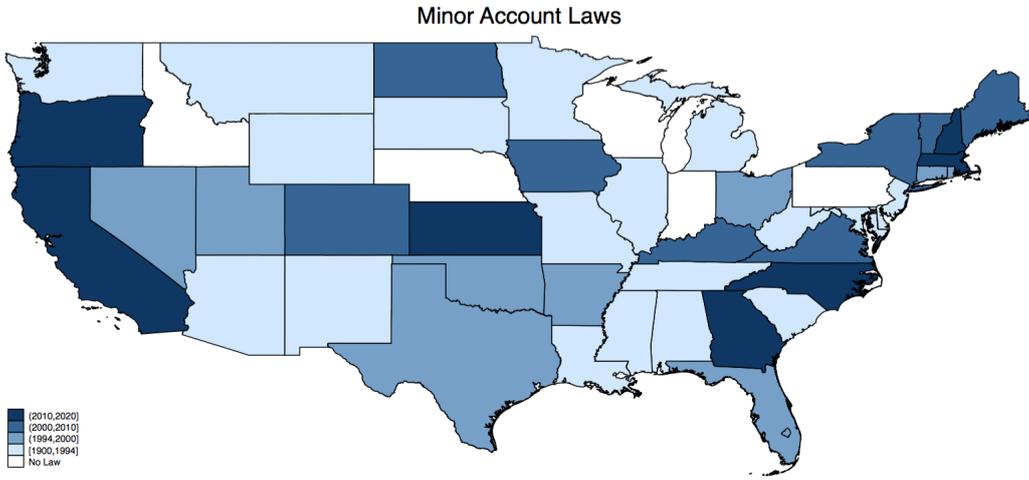
Minor Account Laws

Figure 3: Effects of Minor Account Laws on Banked by Age
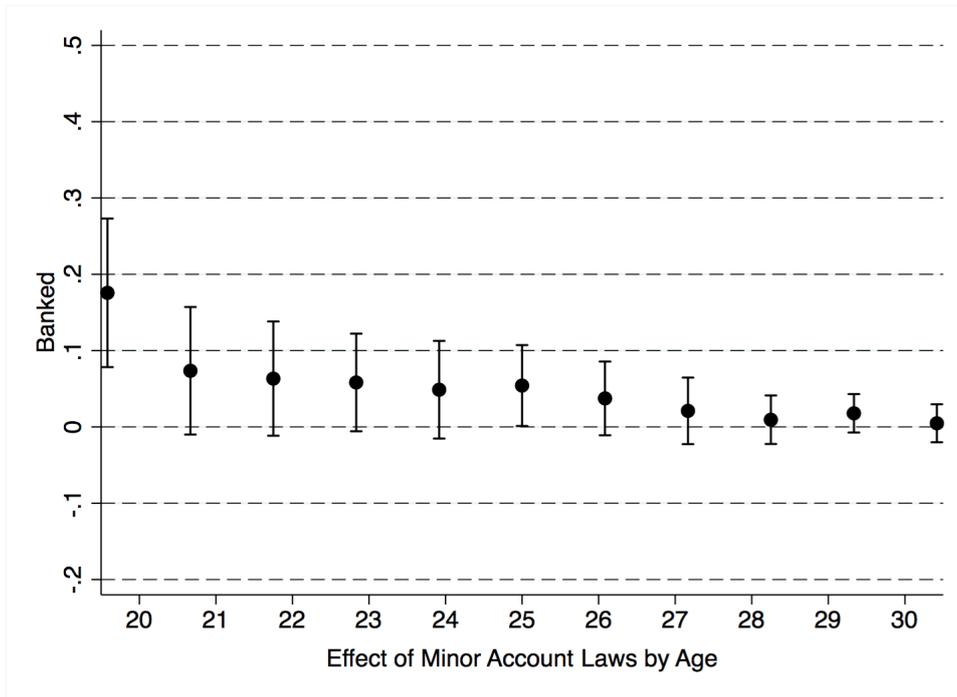
Table 5: Testing for pre-trends

DV =1 if the individual is fully banked			
	Age $\leq$ 20	Age $\leq$ 25	Age $\leq$ 29
	(1)	(2)	(3)
MBL (t-5)			-0.0379
			(0.0282)
MBL (t-4)		-0.0157	-0.00960
		(0.0418)	(0.0206)
MBL (t-3)	-0.0747	-0.0426	-0.0577**
	(0.0791)	(0.0291)	(0.0233)
MBL (t-2)	-0.0784	0.0282	-0.0193
	(0.0850)	(0.0309)	(0.0213)
MBL	0.151**	0.0563**	0.00949
	(0.0552)	(0.0269)	(0.0142)
N	644	5,094	14,453

Notes: robust standard errors clustered at the state level in parentheses. Earliest period includes all other previous periods. Excluded category is t-1. MBL is the post period. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 4: Effects of Unemployment Rate at age 15 on Banked by Age
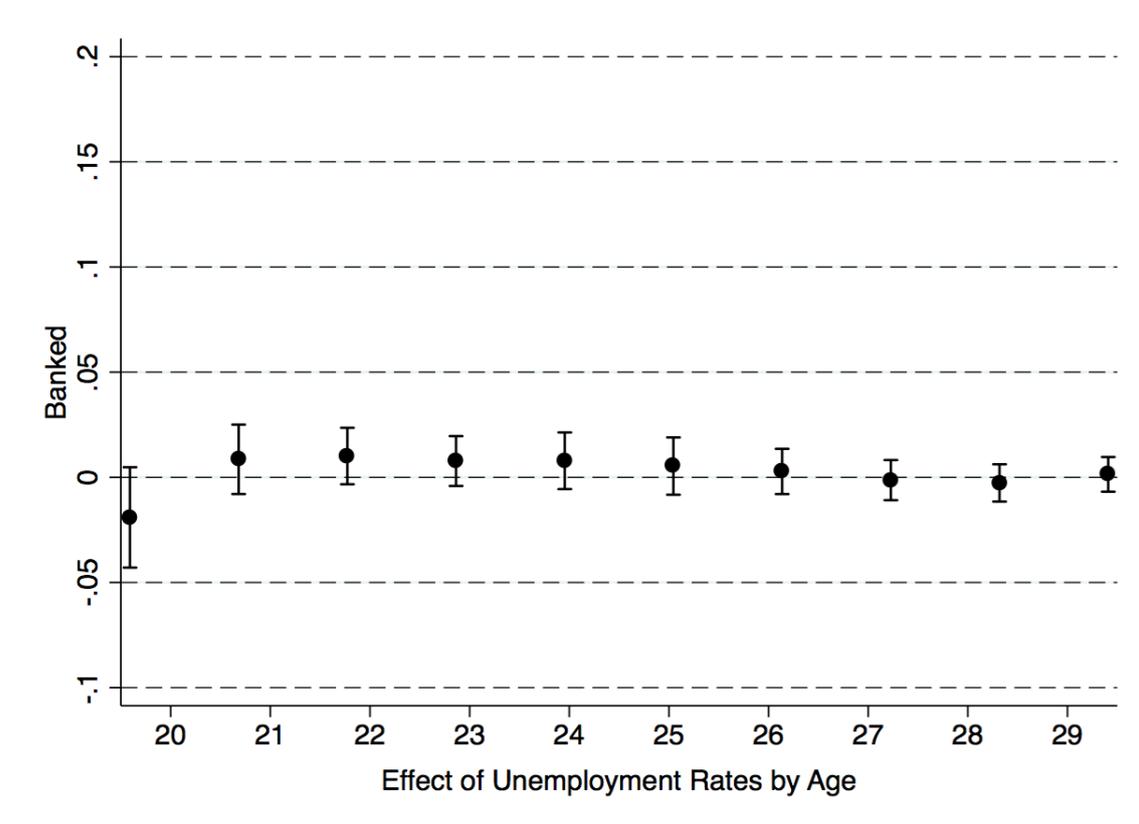
Figure 5: Effects of Minor Account Laws on Employment by Age
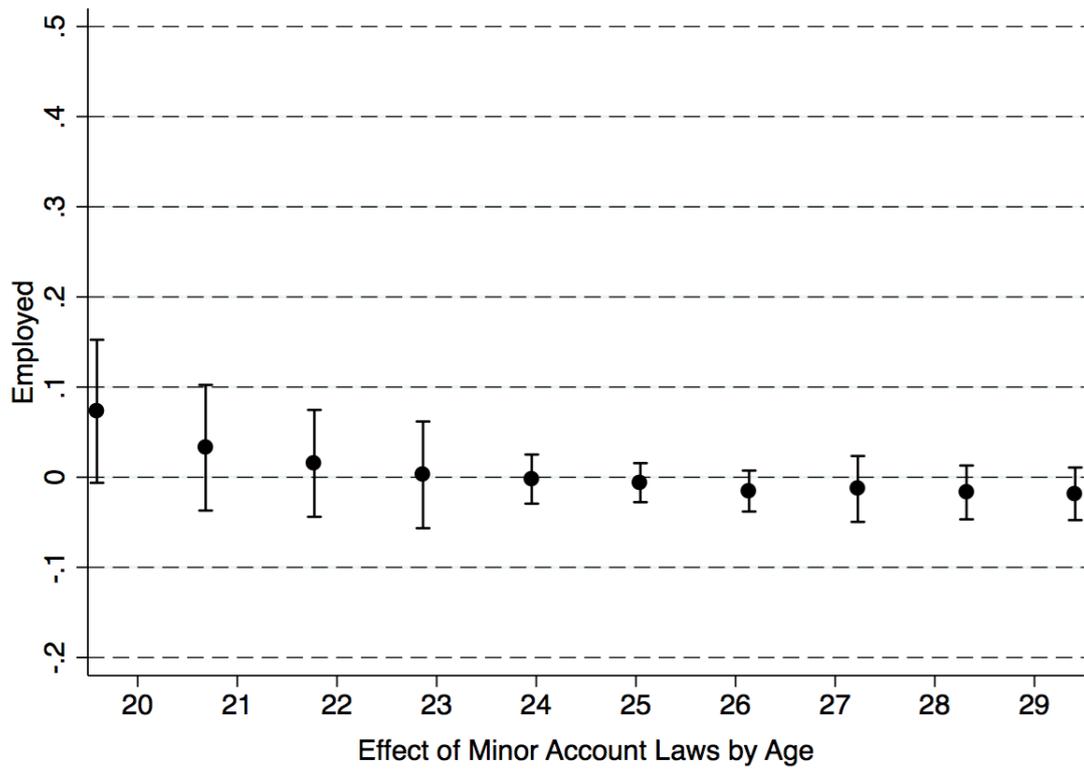
Figure 6: Effects of Minor Account Laws on Unbanked by Age
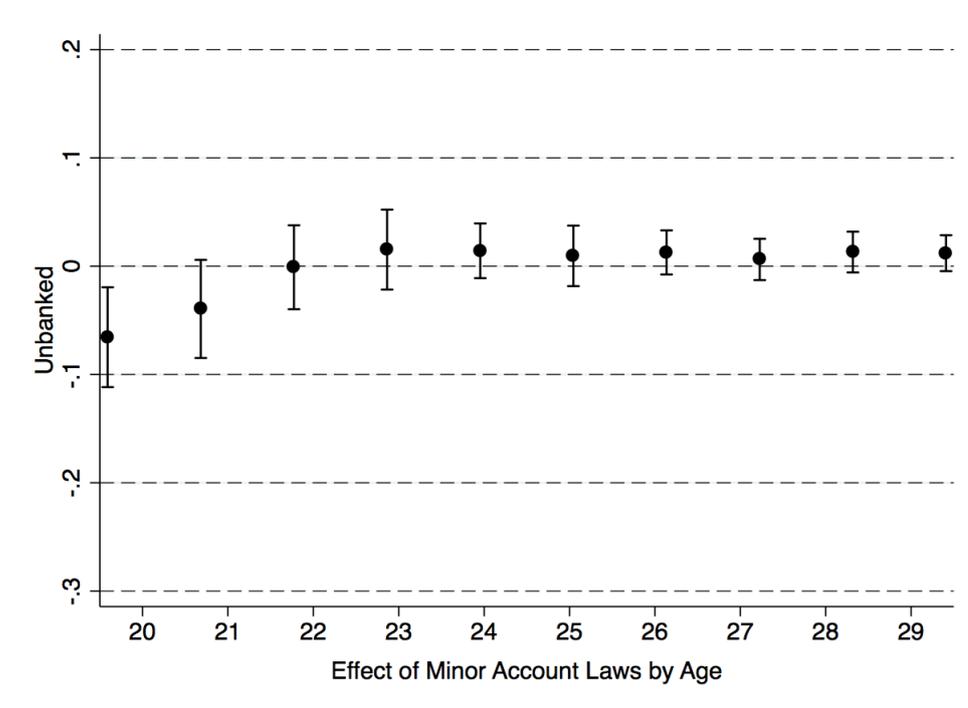
Figure 7: Effect of Minor Account Laws on AFS use by Age
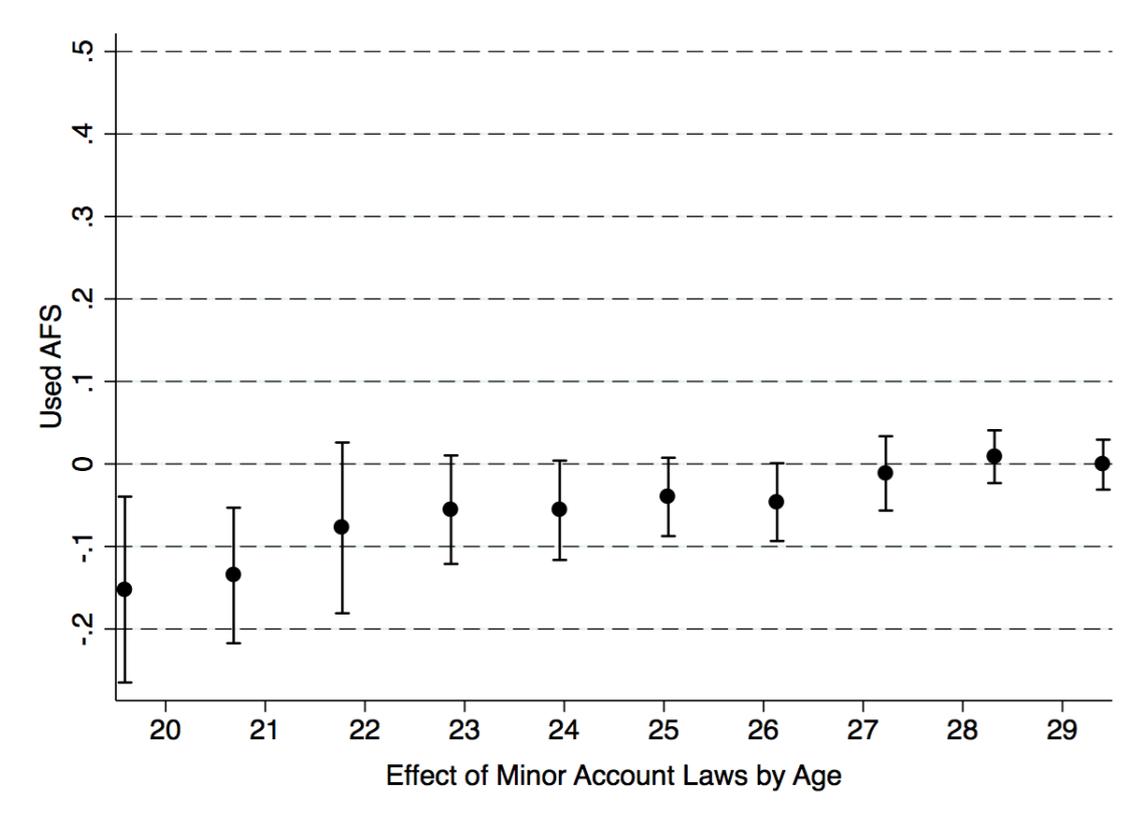
Figure 8: Effects of Minor Account Laws on Banked by Age and Education

Effect of Minor Account Laws for College Goers by Age

Effect of Minor Account Laws for HS Only Education by Age
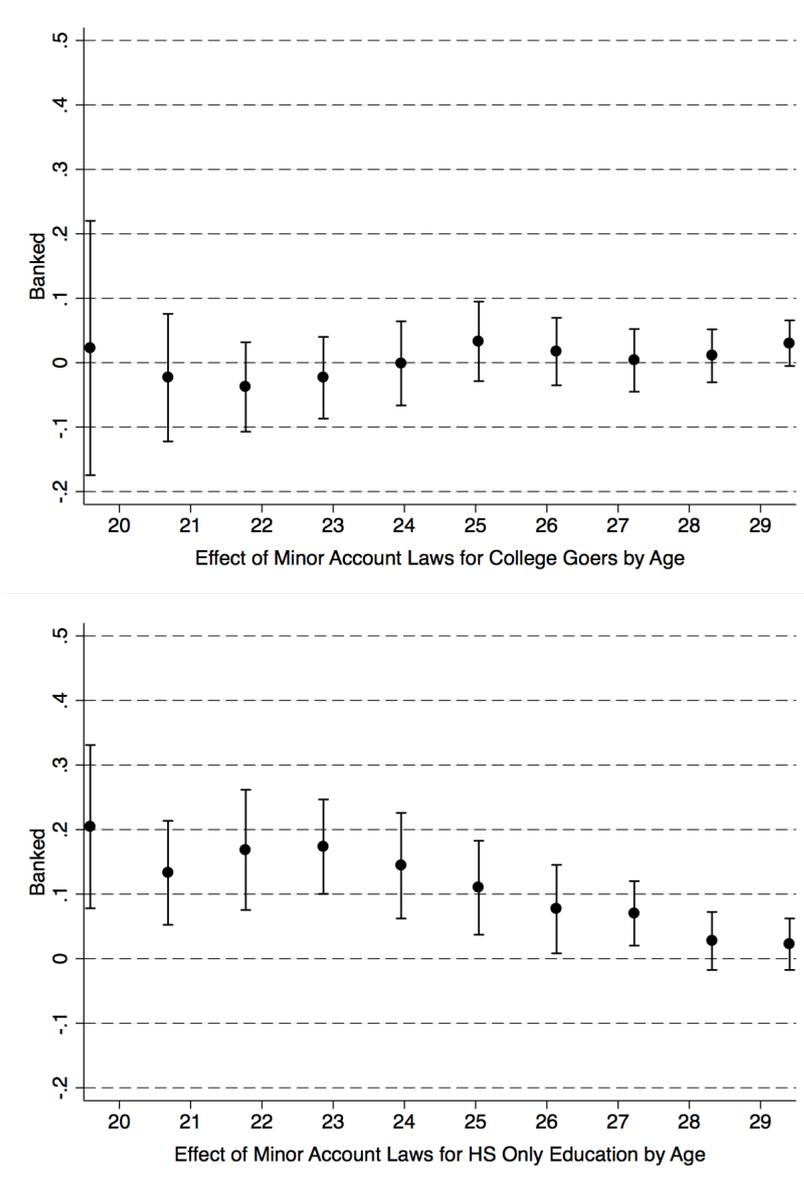
Figure 9: Effects of Minor Account Laws on AFS by Age and Education

Effect of Minor Account Laws for College Goers by Age

Effect of Minor Account Laws for HS Only Education by Age
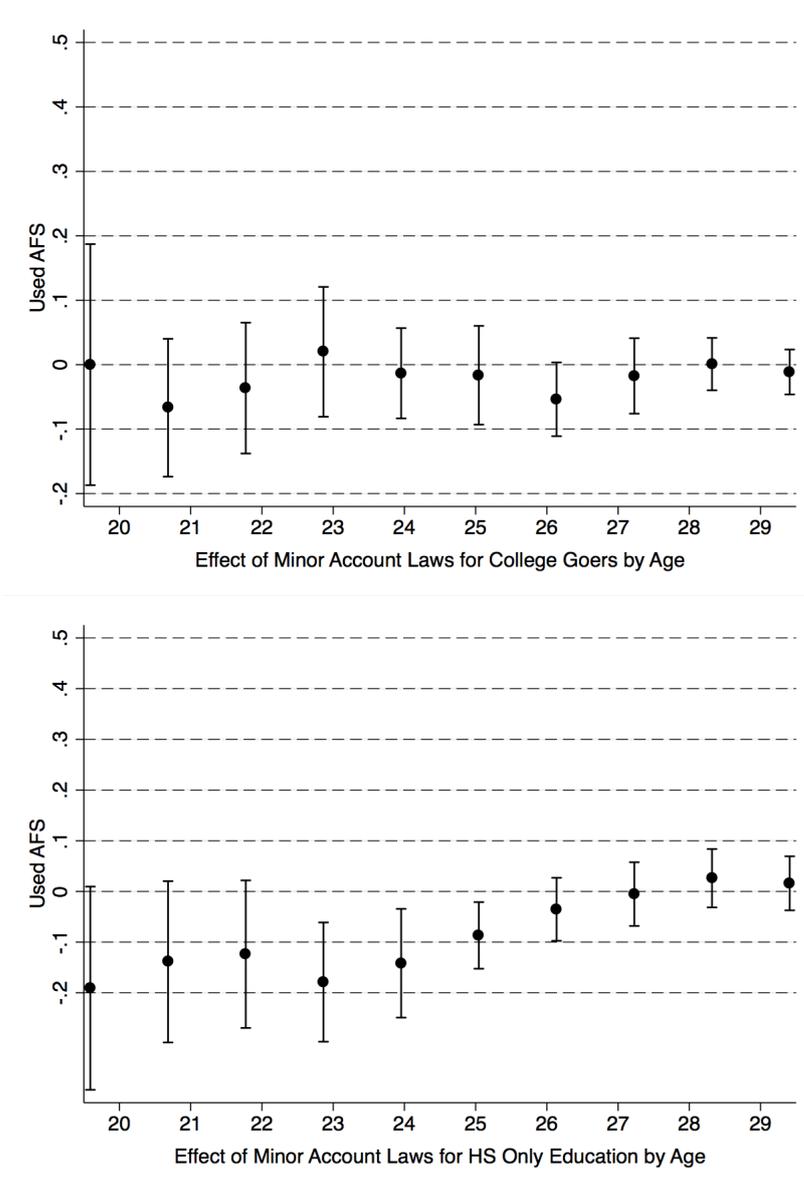
Figure 10: Effects of Minor Account Laws on Banked by Age and Urbanicity
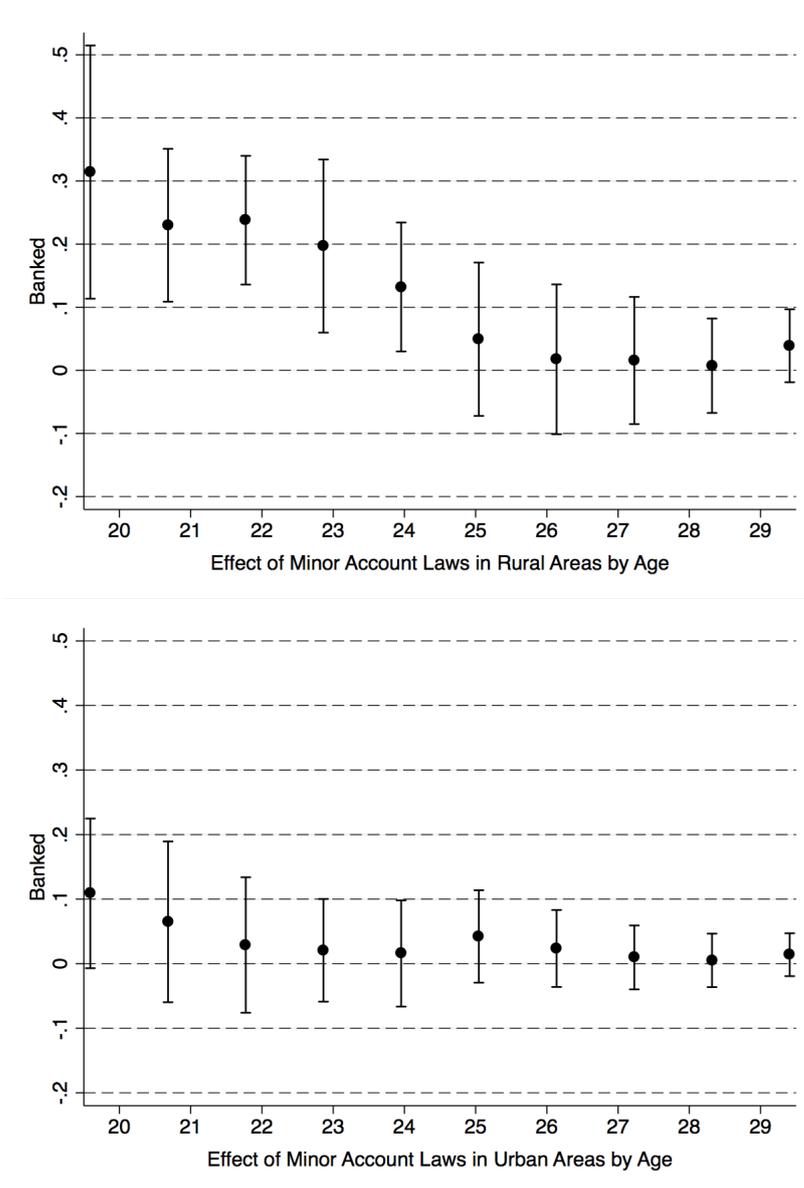
Figure 11: Placebo Test of MBL on Banked by Age
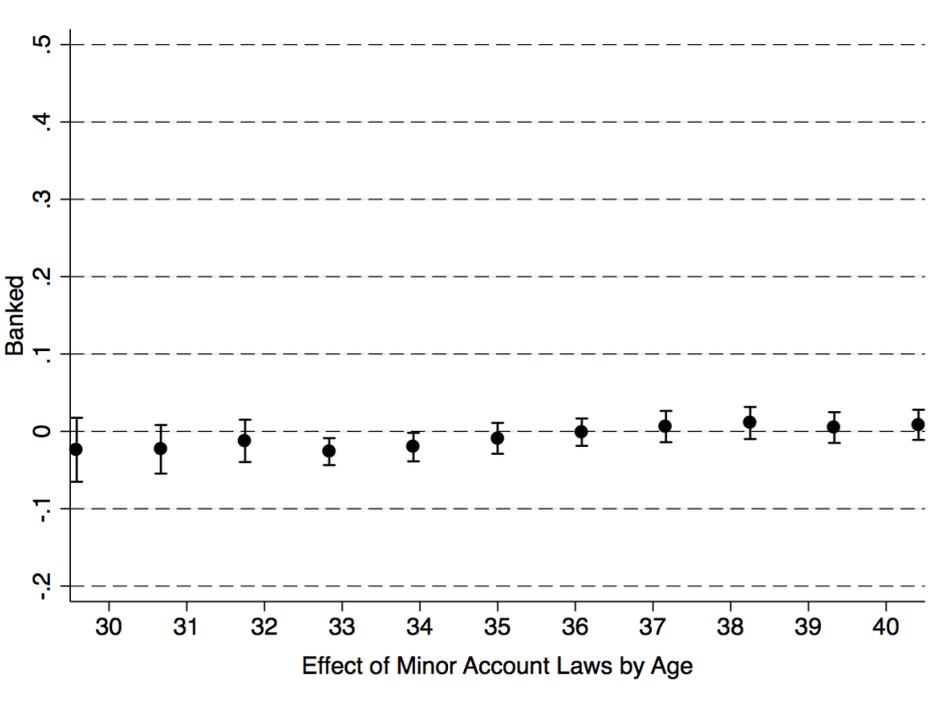
Table 6: Robustness of effects to state linear time trends and state quadratic time trends

Dependent Variable =1 if the individual is fully banked and zero otherwise									
	Age ≤ 20			Age ≤ 25			Age ≤ 29		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
MBL	0.173**	0.197**	0.278*	0.0612**	0.0328	0.0564*	0.0271	-0.000943	-0.00980
	(0.0617)	(0.0876)	(0.136)	(0.0292)	(0.0334)	(0.0314)	(0.0160)	(0.0152)	(0.0192)
N	644	644	644	5,094	5,094	5,094	14,453	144,53	14,453
College only									
MBL	0.0228	0.0187	-0.174	0.0331	0.00417	0.0524	0.0303	0.00294	0.00217
	(0.112)	(0.259)	(0.419)	(0.0358)	(0.0414)	(0.0563)	(0.0208)	(0.0230)	(0.0258)
N	263	263	263	3,140	3,140	3,140	9,430	9,430	9,430
No College only									
MBL	0.205**	0.288***	0.403**	0.110**	0.0648	0.0530	0.0225	-0.00858	-0.0344
	(0.0718)	(0.0840)	(0.146)	(0.0422)	(0.0526)	(0.0606)	(0.0234)	(0.0304)	(0.0436)
N	381	381	381	1,954	1,954	1,954	5,023	5,023	5,023
Controls Included:									
State fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Survey year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year 15 fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
State unemployment rate	Y	Y	Y	Y	Y	Y	Y	Y	Y
State linear trends	N	Y	Y	N	Y	Y	N	Y	Y
State quadratic trends	N	N	Y	N	N	Y	N	N	Y

Notes: robust standard errors clustered at the state level in parentheses. State trends are created using the year the individual turned 15. Minor Law equals one if the individual was over 15 but under 18 the years after the law took effect and zero otherwise. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: Minor Account Laws and FAFSA Filings

Dependent Variable=% in school filed FAFSA			
	(1)	(2)	(3)
	Age <= 18	Age 19 - 24	Age >= 25
Minor Law	-0.00680	-0.02249	-0.01591
	(0.019)	(0.133)	(0.110)
Observations	470	470	470

Notes: robust standard errors clustered at the state level in parentheses. Data from NCES FAFSA filings per capita by state and year. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 12: Effects of MBLs on State and Federal Banks