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Financial Services and Food Insecurity Among Households with Children

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Abstract: Low- and moderate-income (LMI) households with children often face considerable difficulties in ensuring enough financial resources for an adequate diet. This project investigates the use of financial services and other financial decisions parents make that may affect the risk of very low food security and food insecurity of children. With households in both the December 2008 Current Population Survey (CPS) Food Security Supplement and the January 2009 CPS Unbanked and Underbanked Supplement, the project studies the relationship between bank account ownership, use of alternative financial service (AFS) providers, the organization of household finances, and the food security of children. Both children in unbanked households and those in households that use AFS products are more likely to experience very low food security and food insecurity than other households. Children in previously banked households face extremely high risk of food insecurity. Children in households that use AFS products that provide credit are more likely to experience very low food security than households using AFS product for basic financial transaction services. Large associations exist between the use of AFS products providing credit and child food insecurity but only pawn borrowing appears to have a causal effect. Couples that share at least some finances and jointly participate in financial decisions reduce the risk of child food insecurity. Evidence suggests that improved financial literacy and management skills could improve outcomes. Policies to eliminate childhood hunger should include a multifaceted approach that includes financial education, appropriate bank accounts, and access to low-cost credit.

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EXECUTIVE SUMMARY

Low- and moderate-income (LMI) households with children often face considerable difficulties in ensuring enough resources to meet their food needs. As such, the circumstances surrounding why some children in lower income households achieve food security while others become food insecure, or even worse, very low food secure is an important area for research. This project seeks to understand how the financial services utilized by households with children affect the food security status of these children.

With a unique, nationally representative dataset of households in both the December 2008 Current Population Survey (CPS) Food Security Supplement and the January 2009 CPS Unbanked and Underbanked Supplement, this project examines both the food security status of children in these households and the full array of financial arrangements utilized by these households. It captures households with children across the food security spectrum, the mainstream financial services (i.e. bank accounts) and the alternative financial services (such as check cashers, payday lenders, pawn shops, rent-to-own outlets, and tax refund anticipation loans) utilized. It also explores the pooling of household's financial resources between adults in the household to understand how financial organization of parents can affect the child's food security outcomes.

I identify factors associated with very low food security and food insecurity of children with cross-tabulations and regression-adjusted correlations between financial decisions made by parents and the food security status of their children. I find that children in unbanked households and those using AFS products are more likely to experience very low food security and food insecurity than other households. Unbanked households are 4.5 percentage points more likely to have child food insecurity that households that own a bank account. But, not all unbanked households face similar risks. Previously banked households face an extremely high risk of child insecurity, including a 2.6 percentage point increase in the risk of very low food security and an 8.3 percentage point increase in the risk food insecurity, possibly due to an economic shock. Descriptive evidence suggests that improve financial education and management skills could improve outcomes, as could state laws that encourage the availability of appropriate bank accounts for LMI households.

When studying the use of AFS providers, AFS providing credit are associated with a greater risk of child food insecurity and very low food security than AFS products providing basic transactional services. But, use of AFS products providing financial transaction services by banked households appears to indicate a problem of liquidity constraints that increases the risk of child food insecurity. Use of AFS providers for credit is associated with large increases in child food insecurity and very low food security, especially for borrowing from a pawn shop or payday lender. While use of a payday loan is associated with an increase of 1.8 percentage points in the probability of very low food security among children, use of a pawn shop is associated with a 12.0 percentage point increase in very low food security among children. For pawn borrowing, I estimate a causal effect on very low food security among children but do not find a causal effect from the use of payday loans.

Finally, exploring the organization of finances for couples finds that when households share at least some resources, it lowers the risk of food insecurity among children. Additionally, joint participation in financial decisions appears to have a protective effect on food insecurity. However, I find only weak evidence that women with greater control over financial resources improve child food security outcomes.

In total, the results of this project suggest that improved financial literacy and financial management skills would improve outcomes among those households with children at risk for food insecurity. Additionally, access to short-term credits that assist vulnerable households obtain adequate food during an economic shock would also reduce food insecurity. Finally, improved outreach that identifies both households that have a bank account closed by a bank and those living in communities with a large concentration of AFS providers may ensure that assistance is provided to households on the margin of child food insecurity.

INTRODUCTION

The ability to obtain adequate food indicates a household's capacity to meet its basic consumption needs. In 2011, 8.6 million children in the U.S. (11.5 percent) lived in food insecure households and nearly one million of these children experience very low food security, the most severe level of food insecurity (Coleman-Jensen et al., 2012). Yet, the problem of child food insecurity and very low food security is not solely a problem of living with limited means. Many low- and moderate-income (LMI) households with children face challenges in obtaining enough financial resources to meet their consumption needs but some children experience hunger while others do not. Understanding this puzzle will improve policies to eliminate childhood hunger.

A potentially important but relatively unexplored determinant of a child's food security status is the financial decisions made by parents. All households face common financial decisions, from how to budget income to where to access credit. Divergent food security outcomes across otherwise similar households could possibly be explained by some parents making financial decisions that increase the child's risk for very low food security and food insecurity. Parents that forgo a bank account could miss opportunities to save and access affordable credit, limiting opportunities for consumption smoothing during economic shocks. Parents that choose an alternative financial service (AFS) provider, a non-bank provider of financial services, could incur high costs for these services that crowd out food-related spending. And, when parents choose to share finances or jointly make financial decisions with their partner, households may realize economies of scale and make better choices to meet the food needs of their children.

This study examines the relationship between the use of financial services, the organization of household finances, and child food security outcomes with data from the December 2008 Current Population Survey (CPS) Food Security Supplement and the January 2009 CPS Unbanked and Underbanked Supplement. Using households interviewed in two consecutive months of the CPS, I create a nationally representative dataset containing food security outcomes, bank account history, use of AFS providers, and household financial organization. This unique data provides new evidence on a relatively unexplored aspect of food security among children.

I identify factors associated with very low food security and food insecurity of children with cross-tabulations and regression-adjusted correlations between financial decisions made by parents and the food security status of their children. I find that children in unbanked households and those using AFS products are more likely to experience very low food security and food insecurity than other households. However, when examining the data in greater detail, all unbanked households are not at equal risk. Instead, previously banked households face extremely high risk of child insecurity. Descriptive evidence suggests that these households may have experienced an economic shock that both transitioned them out of bank account ownership and led to child food insecurity.

With use of AFS providers, I find that those providing credit increase the risk of child food insecurity and very low food security more than AFS products providing basic transactional services. Still, banked households that use AFS products for basic financial transactions, may increase the child's risk of food insecurity that, perhaps, indicate the presence of liquidity constraints. Evidence that outcomes could be improved with better financial education and financial management skills of LMI households with children.

In terms of AFS products providing credit for households, the use of pawn shops at any frequency is associated with substantial increases in the likelihood of child food insecurity. And, I find evidence that using pawn shops could increase very low food security. Rent-to-own agreements are correlated with very low food security among children and food insecurity but state laws requiring the full disclosure of the purchase price may reduce the harmful effects of using these agreements. Payday loan use and frequent payday loan use is correlated with increases in very low food security and food insecurity but I find no conclusive evidence of a causal effect on measures of food insecurity of children.

Finally, for households headed by couples, I find reductions in child food insecurity when adults share at least some resources and joint participation in financial decisions also reduces the risk of food insecurity among children. I find only weak evidence that women having greater control over financial resources improve child food security outcomes.

While many of the correlations I find do not imply that the financial services could *cause* child food insecurity, they are still useful for understanding childhood hunger and creating a multifaceted approach to reducing the problem of childhood hunger. They present new evidence about a previously unexplored aspect of the very low food security population of interest and, as such, could be used to improve targeting of existing resources, ranging from public service announcements that raise awareness about eligibility for food assistance programs to grants to local communities with a high concentration of alternative financial providers to partnering with other state and federal efforts to expand appropriate banking opportunities and regulate alternative financial providers. They also suggest that policies to combat childhood hunger should go beyond the food safety net but also explore options to connect households with financial services, including appropriate bank accounts for their needs and short-term credit that allows households to smooth an economic shock.

BACKGROUND

All households face common financial decisions, such as how to pool their income, budget their spending, and organize their finances. And, because households require financial services to convert income into payments, store funds for later use, make payments, and access credit when consumption needs exceed income, they must choose where to get services. Specifically, they much choose between many competing financial services offered by banks and non-banks. These decisions, in turn, could affect a household's level of consumption and, therefore, child food security. This section discusses some common financial decisions faced by households.

Bank Account Ownership

The most basic of financial tools is a bank account. Bank accounts provide both basic transactional services, a secure location to store financial assets, and assistance in accessing credit markets. Yet, according to the Federal Depository Insurance Company (FDIC), 9 million children in the U.S. (13.6 percent) live in unbanked households, that is, households where no adult in the household owns a bank account (FDIC, 2012). Over the past two decades, the portion of unbanked households has remained fairly stable despite a large growth in the mainstream and alternative financial services industry (Barr 2004; Washington 2006).

The cost associated with owning a bank account depends on features of the specific product offered by the bank, as well as how the household uses the account. Banks may charge fees to

maintain a checking account or use an ATM; households may pay additional fees if their balance falls below a minimum level or if they overdraw their account. However, the cost of not owning a bank account can also be high, resulting in paying fees for financial transaction services, including cashing checks and paying bills, and preventing the household from accessing the lower cost credit provided by banks (Barr, 2004; Rhine et al, 2006).

A variety of policies to "bank the unbanked" exist due to the idea that bank accounts allow households to avoid high fees for financial transactions, save, and access credit (Barr 2004). Some criticize banks for offering products inappropriate for LMI households, charging excessive and/or hidden fees, imposing unreasonable delays in clearing some checks, and other practices (Barr, 2004; McGrary 2008; Mullainathan and Shafir, 2009). Others note that the cost of remaining outside the banking system may be less than generally assumed (Prescott and Tatar, 1999). As a result, evidence suggests that for some households, not owning a bank account may be the least costly choice (Lyons and Scherpf, 2004; Mullainathan and Shafir, 2008).

Higher income households are significantly more likely to own a bank account than households with low or moderate income (Hogarth et al. 2005). Other characteristics associated with owning a bank account include employment; greater educational attainment; households headed by older adults, whites, non-Hispanics and married couples (Hogarth et al. 2005; Hogarth and O'Donnell 2000l Rhine et al., 2006). Immigrants, especially those living in ethnic enclaves are less likely to be banked (Bohn and Pearlman 2013).

In the U.S., the regulation of banks is highly fragmented. Banks offering checking and savings accounts are regulated by state and federal governments. At the federal level, there are three different regulators: the Federal Reserve for state-chartered banks that belong to the Federal Reserve System, the FDIC for state-chartered banks that do not belong to the Federal Reserve System, and the Office of the Comptroller of the Currency (OCC) for nationally chartered banks.

A number of public policies exist to encourage bank account ownership, ranging from federal efforts to expand the supply of low cost accounts with the U.S. Treasury's *First Accounts* program to financial education programs like the *MoneySmart* program. Seven states have so-called lifeline legislation that requires banks to offer low-cost accounts to low-income adults.

Additionally, a number of state and local governments joined the *BankOn* Campaign, an initiative that partners with banks and non-profits to expand financial access with outreach, financial education, and low-cost bank accounts.

Alternative Financial Services (AFS)

According to the FDIC, between 16.6 million and 25.6 million children in the U.S. (25.1 to 38.7 percent) live in households that used an AFS product in the last year (FDIC 2012). Although there are a growing number of AFS products, for the purposes of this project, AFS products include: non-bank money orders, non-bank check cashing services, payday loans, pawn loans, rent-to-own agreements, and tax refund anticipation loans (RALs).

Many AFS products are similar to services offered by a bank but come at a higher price (Barr, 2004; Rhine et al, 2006). The fees, interest rates, and, in some cases, potential for debt associated with these products generate considerable controversy. Critics believe these services impose excessive costs and generate burdensome debt on vulnerable households; others argue that these providers fill an unmet need for financial products and extend short-term credit to those with few options when facing a cash shortage at a critical time (Mullainathan and Shafir, 2009).

AFS products come in two types: financial transaction services and credit. Non-bank check cashers and non-bank money orders provide basic financial transaction services also provided by banks. Payday loans, pawn loans, rent-to-own agreements, and RALs, provide short-term credit. AFS products are used by both banked and unbanked households, although the unbanked are more likely to use these products. Underbanked households -- households that utilize AFS products despite owning a bank account – may do so because banks do not provide products that fully meet their needs, such as immediate clearing of checks or small loans. Unbanked households often must use AFS products to perform basic financial transactions, like cashing a check, and accessing credit. Use of AFS products is related low or moderate income, unbanked status, education, and age; non-whites, single adults, households with children, and Hispanics are more likely to use these products (Barr 2004; Caskey 1997; Caskey 2002; McKernan et al. 2003; Zinman 2010).

A brief description of these products and their regulations is as follows:

- **Non-bank Check Cashers.** Non-bank check cashers convert a check into cash for a fee. In the U.S., there are approximately 10,000 non-bank business establishments whose primary business is check cashing and many other non-bank businesses that offer check cashing in addition to other services (Barr, 2004). Non-bank check cashers, generally, charge a flat fee plus a fee of 1.5 to 3.5 percent of the face value of the check (Barr 2004). Considerable regional price variation exists and prices tend to be lower for government issued and payroll checks than personal checks due to the low default risk (Barr 2004). One estimate suggests that a worker earning $12,000 would pay $250 annually to cash payroll checks (Barr, 2004).

  There are ways to avoid these fees. Banks offer free check cashing to their customers and, at times, for checks drawn from a customer at their bank. Other establishments, such as convenience stores, liquor stores, and grocery stores, may also cash checks for purchasing customers without a charge. Banked households may use a non-bank check casher due to convenient locations. Or, because banks may require a customer to wait at least several days to clear a check, banked households may use a non-bank check casher to gain immediate access to funds from the check.

  Non-bank check cashers are lightly regulated at both the state and federal level. The Office of the Comptroller of the Currency (OCC) requires that check cashing services that partner with national banks set non-interest charges according to 'sound banking judgment' (Barr 2004). Currently, seventeen states limit the fees a non-bank check cashing outlets can charge or limit the number of check cashing outlets in a given area (Barr 2004; Caskey 1991).

- **Non-bank Money Orders**. Money orders provide a means for bill payment. Many types of providers provide non-bank money orders, ranging from non-bank check cashing outlets to convenience stores to the U.S. Postal Service. Non-bank money orders typically cost $0.50 to $0.60 per money order while money orders purchased at banks cost $1 to $3 (Barr 2004; Caskey 2002). Similar to checks, banked households may substitute a check for a non-bank money order. Because the amount is pre-paid and, therefore, payment is

guaranteed, some payees may require money orders rather than personal checks when paying some expenses, such a rent.

- **Payday Lenders.** There are more than 20,000 payday loan locations in the U.S, issuing an estimated $38.5 billion in credit to 19 million households (Community Financial Services of America 2013). A payday loan allows a borrower to postdate a check or authorize an electronic funds transfer for the loan amount plus associated fees. The payday lender, in turn, agrees not to cash the check until a later date, often the borrower's next paycheck. On the due date, the borrower either pays cash to redeem the check, allows the check to be cashed, or, in some states, pays a fee to extend the loan.

  The typical payday loan is a two week loan for $300 that incurs fees ranging from $45 to $90, resulting in an annualized percentage rate (APR) of 400 to 1,000 percent (Bair, 2005; Elliehausen & Lawrence, 2001; Stegman & Faris, 2003). These high interest rates generate controversy and are one reason why the payday lending industry has received greater scrutiny from regulators, including from the newly formed Consumer Financial Protection Bureau (CFPB).

  Regulation of payday loans occurs at the state level. In general, state usury limits prohibit payday lending (Barr 2004; Flannery and Samolyk 2005). In 2008, 34 states had enacted specific legislation allowing payday lenders to either operate or charge interest rates above the usury limit (Flannery and Samolyk 2005). Fifteen states and the District of Columbia completely banned payday lending either through an explicit ban or an interest rate cap of 36% APR, a level which is generally considered too low to be profitable.

  Federal law does not limit payday lenders, except for members of the military who cannot be charged an APR of more than 36 percent.[1] Over the last decade federal banking regulators ended the so-called "rent-a-charter" agreements, where national banks paired with payday lenders to evade state usury limits and consumer protection laws (Barr 2004).

[1] This occurred in October 2006 with the Talent-Nelson Amendment to the Defense Authorization Act.

- **Pawn Shops.** An estimated 10,000 pawn shops operate (National Pawnbrokers Association, 2013). Pawn shops provide short-term loans using a durable good as collateral. Durable goods that are typically pawned include jewelry, electronic equipment, musical instruments, and firearms. The loan amount tends to be roughly fifty percent of the good's value for a period of one to two months (Caskey, 1991). Upon maturity, if a customer does not repay the loan, ownership of the item is lost but the customer does not incur additional debt.

  The federal government does not regulate pawnbroking. Pawn shops are regulated by state and, at times, local government (Avery and Samolyck, 2011). Typically, states regulate the monthly fees charged by pawn shops and/or whether the borrower can recover any proceeds from the sale of item greater than the cost of the loan and fees (Avery and Samolyck, 2011). Some states also regulate the types of items that can be pawned. Oftentimes, pawn shops are required to report goods used as collateral to law enforcement agencies to ensure they are not receiving stolen property.

- **Rent-to-Own Contracts.** The rent-to-own (RTO) is an $8.5 billion industry with approximately 9,800 rent-to-own stores serving 4.8 million customers in 2012 (Association of Progressive Rental Organizations, 2013). Rent-to-own contracts allow the purchase of new and previously used household goods through a self-renewing weekly or monthly lease. The usual items purchased at an RTO include electronics, furniture, and home appliances (Association of Progressive Rental Organizations, 2013; Zikmund-Fisher and Parker, 1999). If a customer is delinquent, the item is repossessed and the customer loses all accumulated equity. At the end of the rental term, the customer owns the item, but often ends up paying in total two to three times the retail price (McKernan et al. 2003).

  Rent-to-own contracts may be attractive to customers that do not wish to have a formal credit check and/or make a down payment. The size of the customer pool that rents an item until purchase is in dispute with a study by the Federal Trade Commission (FTC) estimating that 67 percent of customers ultimately purchase the RTO item, while the

industry maintains only 25 percent of customers do so (Association of Progressive Rental Organizations, 2013; FTC, 2000).

Rent-to-own contracts are not subject to federal regulation through the Consumer Leasing Act or the Truth-in-Lending Act. Nearly every state regulates these contracts in a manner similar to leases, although the particulars of these laws vary from state to state: 3 states require RTOs to disclose the APR they are charging, 18 require disclosures on product labels, and 15 require RTO stores to display the total cost of the item (McKernan et al. 2003).

- **Tax Refund Anticipation Loans (RALs).** In 2008, 8.4 million RALs were made, earning tax preparers $738 million in fees (Wu and Fox 2012). RALs provide a short-term loan of the taxpayer's expected income tax refund, less any associated fees when the tax preparer files a taxpayer's federal and state income return. The tax preparation firm typically partners with a bank to issue the loan and the loan is repaid when the Internal Revenue Service (IRS) issues the borrower's return. The most likely users of RALs are LMI households receiving the Earned Income Tax Credit (EITC) and other refundable tax credits.

  For some households, RALs are attractive because the taxpayer receives the loan proceeds within a few days of filing the return. In contrast, banked taxpayer receive a direct deposit of their tax refund eight to ten days later and unbanked taxpayers receive refund checks four to six weeks later (Barr 2004; Berube et al. 2002). But, RALs are expensive and often compared unfavorably to the terms of a payday loans. In addition to at least $100 in tax preparation fees, RALs cost at least an additional $100 (Barr 2004; Berube et al. 2002). As a result, the total cost tends to be eight to fifteen percent of the taxpayer's refund and the annualized interest rate on a RAL ranges from 150 percent to 300 percent, depending on how long the IRS takes to process the refund (Barr 2004; Berube et al. 2002).

  The IRS regulates tax preparation services with fee limits and limits on advertising while banking regulators regulate the banks that partner with tax preparation firms. In recent

years, increased scrutiny of RALs by the federal government led to reductions in the number of RALs issued. The two largest tax preparation firms, Jackson Hewitt and H&R Block, stopped offering RALs in the 2010 and 2012 tax seasons, respectively. After April 2012, access to this product effectively ended with the FDIC's settlement with the last of the remaining banks still offering RALs (Wu and Fox 2012).

Financial Decisions Faced by Households with More Than One Adult

For households with more than one adult, they must decide how to organize their finances. Adults can choose either to make decisions about their finances independently or as one unit. When households share their finances, they can realize economies of scale in household production: the greater the extent of sharing, the greater the economies of scale. However, if adults have different preferences about how income should be spent, they may be better off with separate finances. This is particularly true if there is little slack in the budget and one adult spends the household income on a good for their own private consumption. Literature generally finds that the greater participation of both adults, particularly the women in the households, improves outcomes for children, a result attributed to female preferences for greater spending on children (Duflo 2012; Lundberg and Pollak 1996; Lundberg et al. 1997; Phipps and Burton 1998).

RESEARCH METHODS

In this section, I present the model for how the use of different financial services may affect the food security outcomes of children, as well as how the organization of household finances affects child food security. I then discuss the empirical models used to identify these effects.

Theoretical Model

In order to motivate the empirical section, I adopt a simple multi-period model of a representative utility-maximizing household. Households consume only one good, food, denoted as c. In each period, the household receives income, ω, with which to purchase food. For simplicity, we assume that households know their income each period. Households solve the following problem:

1) $$\max \sum_{t=0}^{T} \beta^t u(c_t)$$

subject to

2) $c_t + b_t = \omega_t + b_{t-1}(1 + r_{t-1})$

where b_t is current savings, b_{t-1} is savings from the previous period, and r_{t-1} is the real interest rate earned on savings in the previous period. Assume that households are endowed with no assets so savings in period 1 is equal to 0 (i.e. $b_{-1} = 0$).

I first consider the scenario where households cannot borrow or save so $b_t = 0$ in all periods. In this scenario, it is optimal for households to consume all income in each period. In other words, $c_t = \omega_t$ for all t. If we define food insecurity as the state where consumption is at or below a minimum level, $c_t \leq c^{\min}$, then households will be food insecure in all periods in which $\omega_t \leq c^{\min}$.

Then, I allow households to use bank accounts and AFS providers. These financial services may alter this equilibrium because households can now smooth consumption across time. Formally, the ability of households to save or borrow (i.e. negative savings) leads to the following conditions, solved through a Lagrangian:

3) $L = \sum_{t=0}^{T} \beta^t \left[u(c_t) + \lambda_t (\omega_t + b_{t-1}(1 + r_{t-1}) - c_t - b_t) \right],$

4) $\frac{\partial u}{\partial c} = \beta^t \left[u'(c_t) + \lambda_t (-1) \right] = 0,$

5) $u'(c_t) = \lambda_t$

6) $\frac{\partial u}{\partial b_t} = \beta^t \left[-\lambda_t \right] + \beta^{t+1} \left[\lambda_{t+1}(1 + r_t) \right] = 0$

7) $\frac{u'(c_t)}{u'(c_{t+1})} = \beta(1 + r_t).$

In order to easily compare equilibrium consumption with and without savings, we can assume that utility at period t is $\ln(c_t)$. Thus,

8) $u(c_t) = \ln(c_t)$

9) $u'(c_t) = \frac{1}{c_t}$

Plugging equation 9 into equation 7 yields

10) $\frac{c_{t+1}}{c_t} = \beta(1 + r_t)$

Food consumption in any given period is a function of the current interest rate and the marginal benefit of food consumption in the next period. Households find it optimal to equate marginal benefits across time periods. Because in each period the budget constraint must hold, we can use the inter-temporal budget constraint in order to compare the two equilibriums, with and without access to saving. Using the intertemporal budget constraint in period *T*, I can show:

11) $\omega_T + b_{T-1}(1 + r_{T-1}) = c_T$

and, hence,

12) $b_{T-1} = \frac{c_T - \omega}{(1 + r_{T-1})}$,

which implies

13) $c_0 + \sum_{t=0}^{T} \frac{c_t}{\Pi_{s=0}^{t-1}(1 + r_s)} = \omega_0 + \sum_{t=1}^{T} \frac{\omega_t}{\Pi_{s=0}^{t-1}(1 + r_s)}.$

The intuition for the above equation is that, starting in the first period, households can now optimally choose their food consumption, which may either be above or below their income level in the first period. For households with income above the minimum level to achieve food security in some periods and below it in others, the ability to smooth income across periods increases total lifetime utility, and increases food security. However, for sufficiently low levels of income, a household can still be food insecure, even with the ability to save.

This simple and intuitive setup lends itself to predict how households would respond to other real-world extensions to the model, such as costs associated with borrowing or savings. Intuitively, increases in these costs lead the household to optimally borrow less money in each period and inhibits the ability to smooth income across periods. Therefore, the household optimal path will be closer to the equilibrium without borrowing (or saving) and, leads to more instances of periods of food insecurity within a certain range of income. Overall, lifetime utility will be

lower compared to the equilibrium without saving and borrowing. Similarly, the ability to borrow or save can be shown to improve household welfare as the household's income stream becomes more volatile, or as future income becomes more uncertain.

Additionally, once households face fixed costs with converting cash into check and income into payments, these financial transaction costs will crowd out food spending and also lead to more periods of food insecurity. These costs will lower lifetime utility and households will optimally choose the financial providers that offer the lowest financial transaction costs. As referenced in the previous section, it is uncertain as to whether bank accounts or AFS providers will be optimal because of uncertainty as to which provider will cost the least for any particular household (Lyons and Scherpf, 2004; Prescott and Tatar, 1999).

Finally, this model implies a unitary households that shares all finances and jointly makes financial decisions, weighing each member's utility equally. When households do not act as one unit due to differences in preferences, the outcome will depend on the relevant bargaining power of household members.

Empirical Model

To estimate these relationships, I estimate linear regressions of the form:

$$14) \quad FoodInsecurity = \beta_1 + \beta_2 FinancialDecision + \beta_3 DemoChar + \beta_4 EconChar + \lambda_s + \varepsilon$$

where the outcome variable, *FoodInsecurity*, represents a dichotomous measure of food insecurity of children, *FinancialDecision* represents any of the financial decisions of interest, *DemoChar* represents demographic characteristics of the household, *EconChar* represents economic characteristics of the household, and λ_s represents state fixed effects to control for state characteristics and policies associated with food insecurity and/or financial services. All estimates are weighted by the Food Security Supplement (FSS) weight.

The coefficient of interest, β_2, reflects the correlation between the financial decision of interest and food insecurity of children. Interpreting $\beta_2$should be done carefully because there are likely unobservable characteristics of households that relate to both their financial decision and their food security outcomes.

Using ordinary least squares (OLS), I control for demographic and economic characteristics of the household that have been found to be important in explaining food security and/or financial decisions (for examples, see Barr 2004; Gundersen et al. 2011; Hogarth and O'Donnell 2000). Demographic characteristics include indicators reflecting the household composition (single mother, married couple) with other parents serving as the omitted group. I also control for age, nativity, and racial/ethnic characteristics with indicators reflecting the age range of the primary earner in the household (age age 30 – 39, age 40 – 49, age 50 – 59, age 60 and over) with ages less than 30 serving as the omitted group, controls for the age of the oldest child in the household, and dummies for racial/ethnic and nativity characteristics (non-Hispanic African American, Hispanic, and native born U.S. citizen).

In the matrix of economic characteristics, I include controls for education, income, and employment. These include indicators for educational attainment of the most educated adult in the household (high school graduate, some college, four year college degree, more than a college degree) with less than high school serving as the omitted group, as well as a series of dichotomous variables for the household's income to poverty ratio (100 percent – 130 percent, 130 percent – 185 percent, 185 percent – 300 percent, above 300 percent, and, a dummy for missing income) with less than 100 percent serving as the omitted group. A household employment dummy variable captures the employment status of the most employed adult in the household: full-time workers; part-time worker; unemployed but looking for work; retired or out of the labor force for reasons other than disability; and, not in the labor force due to disability. Full-time employment serves as the omitted group. Because it is illegal to charge a member of the armed forces more than 36% APR, I also include an indicator if an adult is a member of the armed forces. Finally, I include the state-level unemployment rate in 2008 to capture economic conditions facing the household and the availability of mainstream financial institutions with a measure of bank density per 1,000 persons over age 16 in the CBSA.[2]

[2] This measure is constructed from the FDIC Summary of Deposit data for June 30, 2008 and population estimates from the American Community Survey. For households in a CBSA, I measure this at the CBSA level. For households not in a CBSA, I measure this at the state level.

Where possible, I try to present causal effects for the causal effects of financial products on food security of children using two-stage least squares (2SLS) techniques. The instruments for these analyses will come from state-level laws and regulations that may affect a household's access to financial services. Because the data is cross-sectional and the instruments are state laws in place in 2008, I replace state fixed effects with controls for state-level characteristics related to the generosity of the social safety net. The 2SLS models are of the form:

15) $$FinancialService = \gamma_1 + \gamma_2 StateLaw + \gamma_3 DemoChar + \gamma_4 EconChar + \gamma_5 StateCharacteristics + \upsilon$$

16) $$FoodSecurity = \phi_1 + \phi_2 \hat{Financial}Service + \phi_3 DemoChar + \phi_4 EconChar + \phi_5 StateCharacteristics + \eta$$

The matrices of demographic and economic characteristics remain the same as the earlier empirical model. State-level characteristics capture economic and policy characteristics of the state, including, the maximum state EITC for a household with two children, the state minimum wage in 2008, and an indicator that the governor is a Democrat. When these state laws and regulations isolate exogenous variation in the financial services used by households, ϕ_2 provides the causal effect of financial services on food security. Robust standard errors, clustered at the state-level, are used.

DATA

Data for the analysis comes from the December 2008 and the January 2009 Current Population Survey (CPS). The December CPS is the Food Security Supplement (CPS FSS), the official source of food security statistics in the U.S. The CPS FSS asks respondents about household food spending, use of food assistance programs, and whether they were able to afford enough food. The January 2009 CPS contained a special FDIC-sponsored supplement, collecting information on the household's experience with bank accounts, use of AFS providers, and financial arrangements of the household.

To create a dataset containing information on both the food security status of children and the financial decisions of the adults in the household, households in both the December 2008 CPS

and the January 2009 CPS are linked following the recommendations of Madrian and Lefgren (1999).[3] The sample is then limited to households with children to focus on child outcomes.

Food Security Measures

I capture the food security status of children in the household over the past 12 months, based on the USDA's classification of child food security status: high food security, marginal food security, low food security, and very low food security. These classifications are determined from the number of affirmative responses to 8 questions about conditions or behaviors that indicate difficulty in meeting the food needs of children in the household. Respondents affirming two or more items about their children correspond to food insecurity and five or more items correspond to very low food security. In the regressions, I examine very low food security among children and the less extreme food insecurity among children. Food insecurity, as defined by the USDA, includes children classified as either low food security or very low food security.

Measures of Financial Services and Other Financial Decisions

The primary variables of interest are the set of financial decisions made by adults in the household available in the CPS, particularly financial services. I measure unbanked households as those household where the respondent indicates that no one in the household currently owns a checking or a savings account. I also create a variable for previously banked households. The previously banked are those households that are currently unbanked but someone in the household owned an account at one time.

I measure use of AFS products based on the questions in the January 2009 CPS, which asked respondents if they or anyone in the household *ever* did any of the following: cashed a check at a place other than a bank, purchased a money order at a place other than a bank, utilized a payday loan, sold items at a pawn shop, or leased from a rent-to-own store. For each of these AFS products, I create dichotomous variables indicating the household ever used these products. The CPS question related to the use of an RAL differs slightly, by asking if anyone in the household

[3] I thank Alisha Coleman-Jensen for generously providing the matched sample of households. Coleman-Jensen first merged the FSS and FDIC supplement at the person level by state, household identification numbers, and person's line number. Then, characteristics of persons across the two files were compared to ensure that the persons matched were indeed the same in both supplements. The December 2008 CPS Food Security Supplement sample included 44,019 households and the January 2009 CPS supplement sample included 46,547 households. The matched sample includes 29,466 households interviewed in both supplements. After limiting the sample to households with children, 9,381 households with children completed interviews in both months.

used a RAL *in the last five years*. I treat use of an RAL analogously to the other products and create a dichotomous variable based on the household's response.

Because nearly all questions refer to *ever* using these AFS products, I use questions related to the frequency of use of AFS products to better link the timing of use of these products to the child's food security status over the past 12 months. For use of a non-bank check cashing service, non-bank money order, pawn shop, or rent-to-own agreement, the respondent indicates the frequency of use: a few times a year, once or twice a year, or almost never. For payday lending, the CPS specifically asks the number of times in the past 12 months anyone in the household used a payday lender. I use these frequency measures to look at intensity of use and likelihood the household used these services over the same period as the measure of food security.

Finally, I look at the decision to organize household finances, for households with more than one adult. I examine the extent of financial resource sharing: shared finances, some shared and some separate finances, or separate finances despite sharing a living space. Respondents could also volunteer that they were the only adult in the household. From these responses, I create two outcome variables to examine different intensities of shared finances: complete sharing and at least some sharing. Households are classified as at least some resource sharing if they either completely share finances or share some finances.

The extent of participation both adults have in financial decisions is also recorded in households with more than one adult. Respondents report the amount of participation they have in the financial decisions of the household: a lot, some, or not at all. From these responses, I create a variable indicating the respondent reports a lot of participation in financial decisions for the household. I create a second variable indicating the respondents report participating either some or a lot in financial decisions.

Measures of Food Assistance

In descriptive tables, I tabulate use of food assistance. I include the major means-tested federal programs designed to address nutrition and food adequacy, including the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Program for Women, Infants, and Children (WIC), free or reduced price School Lunch (NSLP), and free or reduced price School Breakfast (NSBP). I also include use of the charitable emergency food system, which includes

food received from a church, food pantry, or food bank. SNAP and emergency food receipt are both measured over the past 12 months while WIC, NSLP, and NSBP are measured over the past 30 days. Examining participation in these programs is informative in understanding both the size of the population currently reached by the food safety net and to the population with otherwise unobservable characteristics that require assistance in meeting their food needs.

Descriptive Statistics

Descriptive statistics for the full sample of households with children and sub-samples of households by bank account ownership and AFS use are presented in Table 1. Column 1 presents the full sample, while Columns 2 and 3 divides the sample by banked status and Columns 4 and 5 divide the sample by use of any AFS product (non-bank check casher, non-bank money order, payday loan, pawn loan, rent-to-own agreement, or RAL). Overall, unbanked households and users of AFS products appear similar in terms of demographic characteristics. The economic characteristics of the unbanked suggest more severe hardship than users of AFS products.

Looking at the sample as a whole, the primary earner is, on average, 40 years old and the oldest child is 10 years old. Consistent with the literature, unbanked households and those that use AFS products are slightly younger (36 years old and 39 years old, respectively). The age of the oldest child is approximately the same, indicating that the unbanked and AFS customers were parents earlier in life than other households. While the majority of the overall sample (69.0 percent) consists of households with married parents. The unbanked and households that use AFS products are significantly less likely to be married, suggesting that there are fewer adults in the household to pool financial resources to manage an economic shock.

Among all households with children, household heads tend to be white (78.8 percent), native-born U.S. citizens (82.3 percent). Less than one fifth (17.5 percent) of the overall sample of households is headed by a Hispanic. Both the unbanked and users of AFS products, however, are much more likely to be non-white (41.0 percent of the unbanked and 24.7 percent of AFS users), non-native citizens (29.0 percent of the unbanked and 13.9 percent of AFS users), and Hispanic (37.7 percent of the unbanked and 19.8 percent of AFS users).

Less than one-third (28.8 percent) of primary earners in the overall sample have only a high school degree or less and nearly one-third (31.9 percent) attended some college even if they did

not receive a four-year degree. The unbanked are disproportionately concentrated among those with less educational attainment. Almost one-third (30.6 percent) of the unbanked have the primary earner with less than a high school degree and another 40.7 percent earned a high school degree as their highest educational level. Users of AFS products also have lower educational attainment than the overall sample, although the differences are not as stark. Slightly more than one-third (38.3 percent) of the sample of AFS users obtained a high school degree or less as their highest educational attainment.

Employment of the primary earner and household income levels are consistent with these educational attainment levels. In the overall sample, 84.0 percent of households have the primary earner employed full-time and the remaining households are fairly evenly divided between part-time earners, the unemployed, and others not in the labor force. But, less than half (49.5 percent) of unbanked households have the primary earner employed full-time. Instead, primary earners in unbanked households are much more likely to be employed part-time (13.0 percent) or not working, either due to unemployment, disability, retirement or other reasons. AFS users have higher rates of full-time employment (78.7 percent) than the unbanked but lower rates than the overall sample. Part-time employment (7.0 percent) and unemployment (6.2 percent) for AFS users is slightly greater than the overall sample.

Although 15.1 percent of households have incomes at or below poverty, the majority (58.9 percent) of households have incomes greater than 185 percent of the federal poverty line, a level that makes these households ineligible for SNAP. The unbanked and AFS users are concentrated among households with lower incomes. Both unbanked households and AFS users are significantly more likely to live at or below the federal poverty level (58.7 percent and 23.0 percent, respectively).

In Table 2, I present demographic and economic characteristics for the subsample of households with more than one adult. For this subsample of households with children, the CPS asked questions about the extent of sharing of household finances and the respondent's participation in household financial decisions. The first column of Table 2 provides the characteristics for all households with more than one adult, columns 2 through 5 provides characteristics by the extent

of sharing of household financial resources, and columns 6 through 8 provides the characteristics by the respondent's report of participation in financial decisions of the household.

The first two rows of Table 2 indicate if the respondent in the December 2008 CPS was the same as the respondent in the January 2009 CPS. In a large majority (78.5 percent) of households with more than one adult, the same adult responded in both December and January. This is important because adults in the household may differ as to how they interpret child behaviors and/or may be more knowledgeable about financial affairs. The portion of the sample with the same respondent is generally similar, regardless of the extent of financial resource sharing or the amount of participation in financial decisions of the household. In approximately half (51.3 percent) of households with more than one adult, the same female responded to both December and January.

In terms of demographic characteristics, the primary earner in these households is slightly more than 40 years old and the oldest child is approximately 10 years old. More than three-quarters of households with more than one adult are married couples (78.2 percent) and headed by white (80.9 percent) adults that are non-Hispanic (82.4 percent). These households are more likely to have a college degree (41.9 percent), the primary earner employed full-time (87.7 percent) and have household income greater than 185 percent of poverty (62.1 percent).

The less sharing of finances within the household, the less similar these households look to the overall sample. Lack of sharing of financial resources occurs in households where the adults are not married (61.7 percent) and non-white households, either African American non-Hispanics (13.2 percent) or Hispanic (15.8 percent). Additionally, maintaining separate finances is much more likely to occur in households with lower levels of educational attainment and lower levels of income. More than one-third (34.4 percent) of households maintaining separate finances have a high school degree or less and, possibly as a result, 21.1 percent of these households live at or below the poverty level.

Finally, in Columns 6 through 8, I examine characteristics of households with more than one adult by their participation in financial decisions for the household. In general, households that report a lot of participation appear different than those with no participation, while those with

some participation have characteristics between these groups. Households where the respondent reports no participation in financial decisions tend to have slightly older primary earners (41.5 years old versus 40.6 years old for those with a lot of participation) and older children (11.8 years old versus 10.1 years old for those with a lot of participation). Compared to respondents that report a lot of participation, respondents that report no participation are less likely to be married (76.2 percent versus 87.0 percent), more likely to be non-white (23.0 percent versus 16.5 percent) or Hispanic (26.6 percent versus 14.4 percent), and significantly more likely to be non-native born adults (40.1 percent versus 16.0 percent). Households where the respondent indicates no participation have lower levels of educational attainment, and more likely to be in or near poverty than those with no participation (18.0 percent versus 9.5 percent) despite similar rates of employment.

RESULTS

Use of Mainstream and Alternative Financial Products

I examine the relationship between financial decisions related to the types of financial products used by households and food security outcomes for children with descriptive results. Table 3 presents simple tabulations of these decisions, food security, and use of food assistance programs for all households with children. Column 1 of Table 3 shows the food insecurity rate of children at 10.6 percent, with 1.3 percent of households with children classified as very low food secure. This estimate is nearly identical to the 11.0 percent estimated food insecurity and 1.3 percent very low food security rates among children in 2008 (Coleman-Jensen et al. 2012). The small differences reflect the sample for this analysis includes a smaller sample of households from the December 2008 CPS who were also interviewed in the January 2009 CPS.

Comparing food insecurity rates across households that made different choices regarding the types of financial products, shows that unbanked households (Column 3) are much more likely to contain children with very low food security or low food security than banked households (Column 2). Among all unbanked households, 28.8 percent of households contain food insecure children, including 4.6 percent with very low food security. This compares to the 8.7 percent of banked households containing food insecure children, including 1.0 percent with very low food security. These simple comparisons suggest a large relationship between bank account ownership and food insecurity among children.

The January 2009 CPS provides further detail on the relationship that unbanked households have with banks. I divide unbanked households into those that were previously banked but currently unbanked (Column 4) and those households that never owned a bank account (Column 5). Previously banked households exhibit higher rates of food insecurity and very low food security among children than households that were never banked. In fact, previously banked households have a 5.5 percent rate of very low food security among children (Column 4) while never banked households show a 3.3 percent rate of very low food security among children (Column 5). While the never banked still exhibit high rates of very low food security, the increased prevalence among previously banked households could indicate that these households experienced an economic shock that both led to the loss of a bank account and increased the risk of food insecurity and very low food security.

In Columns 6 and 7, I compare households by their choice to use any AFS product (non-bank check casher, non-bank money order, payday lender, pawn shop, rent-to-own outlet, or RAL). Households that ever used any AFS product exhibit higher rates of food insecurity and very low food security among children than households that did not ever use any AFS product. Households that ever used any AFS product (Column 6) have a 16.3 percent rate of child food insecurity and a 2.0 percent rate of very low food security. This compares to a 6.6 percent rate of child food insecurity, including a 0.1 percent rate of very low food security, for households that never used any AFS product. While these rates are lower than the rates for the unbanked and, especially the previously banked, they are greater than the sample of households overall.

Next, I examine outcomes related to the use of food assistance. Among all households with children, 13.9 percent report receiving SNAP in the last 12 months, 8.5 percent report receiving WIC in the past 30 days, 20.6 percent report receiving reduced or free School Meals in the past 30 days, and 15.5 percent report receiving the national School Breakfast program in the past 30 days. The higher receipt rates for SNAP rather than other nutritional assistance programs may be due to the lack of age restrictions on children to receive as SNAP. Few households (5.4 percent) utilized non-profit, emergency food programs.

Compared to the overall population of households with children, the unbanked and those that ever used an AFS product are significantly more likely to use food assistance programs. More than half of the unbanked (52.6 percent) received SNAP in the last 12 months whereas only 9.8 percent of the banked received SNAP. An even greater percentage of the previously banked (56.2 percent) received SNAP in the last 12 months. Receipt of other nutritional assistance is also high for the unbanked, including free or reduced price School Meals (52.9 percent School Lunch and 44.3 percent School Breakfast) and WIC receipt (25.6 percent) in the last 30 days. Compared to banked households, the unbanked are more than three times as likely to receive WIC and School Meals. Highlighting the financial vulnerabilities that unbanked household face, 16.6 percent of unbanked households report receiving emergency food in the last 12 months compared to 4.2 percent of the banked.

Households that ever used an AFS product are more likely to receive food assistance than those that never used AFS products. However, users of AFS products have lower participation rates than unbanked households. Nearly one-quarter of households that ever used an AFS product (23.0 percent) received SNAP in the last 12 months versus 7.6 percent of those that never used an AFS product. Receipt of other nutritional assistance programs is also greater than those that never used AFS products.

In these simple cross-tabulations, households that chose to not own a bank account appear more likely to face very low food insecurity among children and to use food assistance programs to meet their food needs. Previously banked households appear the worst off. Households that ever used AFS products also appear to face food-related distress, although not to the extent as the unbanked or previously banked. These relationships could reflect other characteristics of the households. I explore how these choices affect child food security, controlling for other aspects of the household with a regression, beginning with the decision to own a bank account.

Decision to Own a Bank Account

I estimate the correlation between food security of children and owning a bank account, controlling for observable characteristics of households using Equation 14. In Column 1 of Table 4, an unbanked household is correlated with an increase in the probability of very low food security among children of 1.7 percentage points. With 1.3 percent of the overall sample

classified as households with very low food security among children, the magnitude is quite large. The point estimate, however, is not statistically significant.

Because Table 3 indicated that differences exist between households previously unbanked and those never banked, I break the unbanked into these categories (with banked households serving as the omitted group). In Column 2, relative to banked households, no correlation exists between never owning a bank account and very low food security among children. However, previously banked households are correlated with a significant increased probability of very low food security among children of 2.6 percentage points. The magnitude of this relationship suggests a dramatic association between these who no longer having a bank account and childhood hunger.

In Columns 3 and 4 of Table 4, the same models are estimated for the child food insecurity outcome. A significant association is shown between not owning a bank account and child food insecurity of 4.6 percentage points (Column 3). But, as Column 4 shows, this appears driven by the relationship between the previously banked and child food insecurity. No significant or important relationship is seen between the never banked and child food insecurity. But, if a household was previously banked, it is associated with a statistically significant, 8.3 percentage point increase in the likelihood of child food insecurity.

To put the magnitude of these estimates in perspective, a recent estimate for the effect of SNAP receipt suggest that SNAP receipt is associated with a reduction of 30 percent in food insecurity and 20 percent for very low food security (Ratcliffe et al., 2011). With the child food insecurity rate in the sample at 10.6 percent, when parents close a bank account or have the bank account closed on their behalf, it is associated with a 78.3 percent increase in the probability of child food insecurity. While not causal, the differences in the relationship between the formerly banked and never banked are somewhat surprising. One possible explanation could be unobservable economic shocks to the household that may affect both bank account ownership and child food security.

To understand why the previously banked exhibit such high correlations with child food insecurity, Table 5 presents the time since these households owned an account (Columns 1 and 2). Households previously banked sometime during the past year would have been banked during

at least some portion of the time food security over the past year was measured. An account closure within the year could represent a recent economic shock that could also cause an increase in very low child food security and child food insecurity. But, households unbanked for less than a year look similar to households unbanked for more than a year in terms of child food security. The very low food security among children is virtually identical (5.8 percent and 5.3 percent) but low food security rates are slightly higher for households that owned an account within the last year (29.8 percent) than those that were banked more than one year ago (25.6 percent).

In terms of use of food assistance, households that owned an account sometime during the last year have lower rates of participation in all food assistance programs despite slightly higher rates of child food insecurity. This could suggest that previously banked households that were more recently banked may either be less likely to be eligible for food assistance or unaware of their eligibility. Lower rates of receipt of emergency food programs, where there are likely no income requirements, provides greater support for the former explanation because there tend not to be income requirements to use these food assistance sources. In sum, only the slightly greater rates of low food security provide support for a common shock causes both child food insecurity and unbanked status.

In Columns 3 and 4 of Table 5, I divide the previously banked by who closed the account: a member of the household or the bank. A customer closing a bank account could mean that household preferences or lack of financial education to understand the benefits of owning an account are important in explaining outcomes for the previously banked. In contrast, when banks close an account, it typically signifies account inactivity, frequent account over withdrawals, or other instances of fraud. Overall, 81 percent of previously banked households report closing the account themselves and 19 percent reported the bank close the account for them. Although not statistically significant due to a small sample size, households that closed their account experience lower rates of very low food security among children than those where the bank closed the account (5.4 percent and 9.4 percent, respectively). Larger and statistically significant differences exist for low food security. The portion of the sample of households where the bank closed the account have approximately twice as large low food security rates as households that closed the account themselves.

Additionally, households that report the bank closed the account show significantly higher participation rates in SNAP (69.8 percent of those where the bank closed the account versus 54.2 percent of those closing the account themselves), as well as significantly higher reports of receipt of emergency food programs (34.4 percent of households where the bank closed the account and 18.8 percent of households that closed the account themselves). Previously banked households that had the bank close their account also show higher rates of receipt of other food assistance programs. Coupled with higher rates of child food insecurity among this sample, the more intense use of food assistance programs provides suggestive evidence that financial problems and lack of financial management skills may explain the relationship between the previously banked and child food insecurity.

To investigate this explanation in Table 6, I control for observable characteristics with a regression but break up the formerly banked into two different ways: time since the household owned the account (Columns 1 and 2) and who closed the account (Columns 3 and 4). All estimates in Table 6 are reported relative to the currently banked. Examining households with very low food security in Column 1, point estimates for the formerly banked are positive but insignificant for both households that were banked within the last year and those banked more than one year ago. No relationship exists between the never banked and very low food insecurity.

In Column 2 of Table 6, I examine the child food insecurity outcome. Positive and significant point estimates are shown for both types of previously banked households. Previously banked households that were banked within the last year are associated with a 12.9 percentage point increase in child food insecurity while previously banked households that were banked more than one year ago are associated with a 6.2 percentage point increase in child food insecurity. While these estimates are not statistically different from one another, households that closed their account with the last year are significantly different from the never banked.

Estimates for who closed the account are also included in Table 6. Compared to the currently banked, the previously banked that closed their account themselves are positively but not significantly related to very low food security among children (Column 3). The relationship for the formerly banked that had the bank close their account on very low food security among children is still insignificant but the point estimate is larger at 5.8 percentage point increase.

In Column 4, I examine child food insecurity and find larger and significant relationships. Previously banked households that closed the account themselves are related to a significant increased probability of child food insecurity of 5.6 percentage points. However, previously banked households that had the bank close the account are associated with a 23.1 percentage point increase in food insecurity among children, compared to the banked. Not only is the magnitude of the effect striking – a more than 200 percent increase in this likelihood – these point estimates are significantly different from one another. Households where the bank closed the account differ from households that closed the account themselves in terms of child food insecurity. Thus, economic shocks and financial management skills both remain a likely explanation of the observed behavior.

In sum, the relationship between owning a bank account and food insecurity among children is strongest for the previously banked, rather than the entire population of the unbanked. Moreover, this effect is strongest for those who more recently closed the account and for those that experienced the bank closing the account. With the negative stigma associated with a bank closing the account and, therefore, likely misreporting of who closed the account, these relationships could be lower bound estimates. This suggests that targeting of food assistance to reach these households may reduce very low food security among children.

To gain further insight into why households that had a bank account at one time exit the banking sector, I tabulate self-reported reasons the unbanked do not own an account. In Columns 1 through 4 of Table 7, I report the main reason why previously banked households who closed their account gave for doing so. I group responses into four reasons: economic, financial management skills, customer service, and other reasons to examine the underlying cause the household cites for not owning an account.

For previously banked households that closed their account, a near majority (45.5 percent) indicated the main reason for exiting the banking system fell into “other” reasons (Column 4) and another large portion (38.8 percent) provided economic reasons for closing their account. These “other” reasons include including not writing enough checks, reporting they did not need or want a bank account, and write-in reasons. Economic reasons include high minimum balance

requirements, high service charges, or too little money for an account. The remaining households were categorized as financial management skills (8.2 percent) and customer service (7.5 percent) reasons. Thus, idiosyncratic preferences, followed by indicating the costs of a bank account or their own economic constraints, are behind many of these decisions.

To see how child food insecurity and very low food security relate to these reasons, I examine child food security status. Somewhat surprisingly, the highest rates of child food insecurity are among the 15.7 percent of these households that don't cite economic or other reasons. Nearly one-third (32.4 percent) of households that report financial management skills (Column 2) with owning a bank account experienced child food insecurity, including 13.1 percent of children with very low food security. These financial management skills include reports that they could not manage or balance a bank account, experiencing too many overdrafts or bouncing too many checks, or banks taking too long to clear checks.

Although no household that reported customer service reasons (Column 3) for closing their account experienced very low food security among children, these households were actually the most likely to face child food insecurity because a majority (53.0 percent) contain children with low food security. These high rates are surprising as customer service reasons, including inconvenient hours or location, language barriers, lack of trust or comfort with banks, or not offering desired services like check cashing, seem the least related to difficulties in affording adequate food. Broadening the reasons to all possible reasons for closing the account rather than the main reason, however, does find evidence of financial constraints among those citing customer service reasons. These include minimum balance requirements (24.9 percent), service charges (34.0 percent), not enough money (27.2 percent), didn't need or want a bank account (38.0 percent), or didn't trust banks (42.5 percent).

The two most popular reasons for closing the account, economic and other, show the lowest rates of child food insecurity of all these households (23.4 percent and 27.7 percent, respectively), even if these and very low food security rates are still quite high. Among the previously banked that closed their account citing economic reasons (Column 1), 6.0 percent experienced very low food security. Respondents categorized as providing other reasons why they closed their account, including not writing enough checks to make it worthwhile, believing they did not need or want

a bank account, or write-in reasons (Column 4), had a 4.7 percent rate of very low food security among children. These households have higher rates of low food security (23.0 percent) than other households that closed their account but slightly lower rates of very low food security (4.7 percent) than other households.

In Columns 5 through 8 of Table 7, I tabulate the main reasons the never banked gave for not own an account. I again categorize these reasons into four groups: economic reasons (Column 5), financial management skills (Column 6), customer service (Column 7), and other (Column 8). Overall, most never banked households report that they are unbanked due to economic reasons (52.8 percent), primarily (79.7 percent) because believe they do not have enough money to need a bank account. Unbanked household citing economic reasons also have the highest rates of child food insecurity with approximately one-third (33.2 percent) of households with child food insecurity, including 3.1 percent with very low food security among children.

Only 10.7 percent of never banked households report the main reason pertains to financial management reasons (inability to manage or balance a bank account, lack of knowledge about how to open a bank account, credit problems that prevent the opening of an account, not seeing the value of having a bank account, or bouncing too many checks or making too many overdrafts for an account). However, these households have the highest rates of very low food security among children (6.9 percent) of all never banked households and high rates child food insecurity (30.9 percent).

The lowest rates of food insecurity among children (12.6 percent) are among respondents that reporting not ever owning a bank account due to customer service reasons (inconvenient hours or locations, language barriers, lack of trust or comfort in banks, or lack of services, like check cashing, that they demand). Low rates of food insecurity for this sub-sample are in marked contrast to the high rates of food insecurity among children for the previously banked that closed their account for customer service reasons. Unlike those previously banked due to customer service reasons, the never banked households may have the financial skills themselves to manage their finances but choose to not own an account because of personal distaste for the banking industry.

Approximately one fifth of the never banked population (20.1 percent) report other reasons for not owning an account. These include not writing enough checks to make a bank account worthwhile (15.2 percent of this group), lack of proper documentation (14.9 percent of this group), inability to choose a single reason, or volunteering another answer. These never banked households exhibit high rates of food insecurity among children (17.2 percent), but relatively low rates of very low food security (2.6 percent).

Can State Banking Policies Affect These Relationships?

The discussion thus far finds examines correlations between the parent's current ownership of a bank account or the parent's history of bank account ownership and child food security. For crafting policies to address childhood hunger, ideally we would like to know if exiting the formal financial sector *causes* an increase in child food insecurity or if it indicates another aspect of the household and its economic environment. Evidence presented thus far on the types of unbanked households that experience very low food security among children and reasons why these households chose to not own an account gives support to the idea that a common economic shock causes both unbanked status and child food insecurity.

While a variety of federal, state, and local policies exist to "bank the unbanked", none of these work well as an instrument, in part, because policymakers have had little success in boosting bank account ownership rates (Prescott and Tatar, 1999).[4] Instead of a 2SLS approach, I examine if state-level policies can affect the relationship between the formerly banked and child food security. Based on work by Washington (2006), I examine two state-level policies: lifeline legislation and the regulation of check cashing services. Because lifeline legislation should lower the cost of bank account ownership, it should make it less likely that households close their bank account. Assuming households are relatively price inelastic, as Caskey (1991) suggests, states that regulate non-bank check cashers will reduce the supply of non-back check cashers and bank account ownership will for households to remain in the formal financial system to receive basic financial services. Household decisions to be banked and use non-bank check cashers are made jointly (Rhine et al. 2006).

[4] The nature of the CPS also makes the task of finding strong instruments more difficult. The cross-sectional data makes it impossible to utilize federal policies because all households were affected while new state and local policies that could affect the banking decision occurred after the January 2009 data was collected and variation in banking policies across localities would be difficult to measure in the public use version of the CPS.

In Table 8, I explore these relationships by interacting these state policies with the detailed variable of banking status. In Columns 1 and 2, I examine very low food security among children. Compared to banked households, in states without lifeline legislation, the formerly banked have a 2.6 percentage point increase in the probability of very low food security. In states that don't regulate check cashers, the formerly banked have a statistically insignificant 3.8 percentage point increase in very low food security, compared to the banked. In Columns 3 and 4, I repeat the analysis for the child food insecurity variable. The pattern of estimates is similar but coefficient estimates are larger: a statistically significant 8.8 percentage point increase in the probability of food insecurity for the formerly banked in states without lifeline legislation and a statistically insignificant increase of 6.6 percentage points in the probability of food insecurity for the formerly banked in states that don't regulate check cashers.

In sum, while policymakers have had difficulty in increasing bank account ownership rates, states policies do appear to be correlated with keeping households in the financial system and reduce the risk of very low food security and food insecurity among children. This suggests ensuring that households remain connected to financial system, particularly during economic shocks.

Alternative Financial Services

Next, I consider decisions related to the use of AFS products. Because the simple cross-tabulations of AFS product use and child food security, shown in Table 3, show a large correlation between AFS product use and food insecurity, I begin with regressions that estimate the relationship between use of any AFS products and very low food security among children, controlling for observable characteristics of the household. Then, the types of AFS products and the frequency of use will be examined in detail.

As shown in Table 9, ever using any AFS product (non-bank check casher, non-bank money order, pawn loan, payday loan, rent-to-own contract, or RAL) has no statistical or economic correlation with very low food security among children. The point estimate is small and insignificant. In Column 2, I measure AFS products ever used as a continuous measure. When AFS products are measured continuously, each additional AFS product is significantly correlated with an increased probability of very low food security among children of 0.6 percentage points.

Although this effect appears small, given that only 1.3 percent of households overall contain children with very low food security, the estimate is relatively large. Each additional AFS product increases the prevalence of very low food security by 50 percent.

In Columns 3 and 4, I investigate the effect of AFS product use on child food insecurity. Measured as a dichotomous variable, ever using any AFS product is associated with a significant increase in the probability of child food insecurity of 4.5 percentage points. When AFS product use is measured continuously, each additional AFS product the household ever used increases the probability of child food insecurity by 3.9 percentage points. These correlations between AFS product use and child food security measures suggest that using AFS products is associated with declines in child well-being.

I examine use of these products in greater detail, beginning with use of each of these products individually Table 10. Each column presents cross-tabulations of someone in the household ever using the product, with the exception of the RAL decision which refers to the last 5 years. Among those ever using any AFS product, the products most likely to have been used are those that provide basic financial transaction services: non-bank check cashing (Column 1) and non-bank money orders (Column 2). Almost one-third (31.4 percent) of users of any AFS product had ever used a check casher while 79.7 percent of users of any AFS product had ever used a non-bank money order. Use of AFS products that provide credit – payday loans, pawn loans, rent-to-own agreements, and RALs – are much lower with 13.2 percent, 17.0 percent, 14.0 percent, and 14.1 percent of AFS users reporting the use of these products, respectively. Although usage rates for unbanked households are greater than for banked households, a large portion of banked households report using these services at one time.

Next, I examine simple comparisons of child food security outcomes by households that ever used each specific AFS product. Despite fewer households reporting use of AFS products that provide credit, rates of very low food security for users of AFS products for financial transaction services are nearly twice as high as users of AFS products for credit. For AFS products that provide basic financial transaction services, household that report ever using non-bank check cashing services exhibit nearly the same rates of very low food security among children (2.5 percent) as households that ever used money orders (2.0 percent). However, rates of low food

security for users of non-bank check cashing services are approximately six percentage points higher than users of non-bank money orders (20.2 percent compared to 14.4 percent).

For AFS products providing credit, very low food security rates are high but low food security rates are only slightly higher than those of AFS products for financial transactions. Rates of very low food child security are 3.5 percent for payday loans (Column 3), 5.1 percent for pawn loans (Column 4), 3.0 percent for rent-to-own agreements (Column 5), and 4.0 percent for RALs (Column 6). Rates of low food security for households that report ever using these credit products, range from 21.1 percent for rent-to-own agreements to 23.1 percent for households that ever used a pawn shop. The greater prevalence of food insecurity for users of credit products than for users of financial transaction products could indicate that households with child food insecurity have insufficient access to credit and need high-cost, short-term credit. Or, it could suggest that use of these AFS credit product *cause* child food insecurity.

Examining food assistance, however, suggests less dramatic differences across users of different types of AFS products. For example, use of SNAP during the past year is in the range of 20 to 30 percent across all types of AFS products. Relatively low levels of SNAP participation are surprising, given the high prevalence of low food security among children, suggest that these households are either ineligible for SNAP, unaware of their eligibility for SNAP, or the level of SNAP benefits is inadequate. The section presents more detail on AFS products providing transaction services before examining AFS products providing credit.

AFS Products Providing Basic Financial Transactions

Because the questions in the CPS largely relate to households ever using these products, I examine the reported frequency of use of AFS products providing financial transactions. Respondents indicating someone in the household uses these services at least a few times a year or once or twice a year are more likely to have used these products over the same time period food security was measured. In contrast, those reporting they almost never used these products would be less likely be customers of these providers over the last 12 months.

I present the frequency of basic financial transactions in Table 11. Columns 1 through 3 include the reported frequency of use for non-bank check cashing services among households responding

they ever used a non-bank check casher. The majority (54.0 percent) of users of non-bank check cashers used these services at least a few times a year while roughly 20 percent of users only report using non-bank check cashers once or twice a year. Only one quarter (25.9 percent) almost never used these services.

Columns 4 through 6 present the frequency of use of non-bank money orders for those reporting they ever used a non-bank money order. Households that report ever using non-bank money orders are less likely to be regular users than users of non-bank check cashing services. Less than half (43. 4 percent) of households that ever used a non-bank money order do so at least a few times a year and approximately one quarter use non-bank money orders once or twice a year. One-third (32.8 percent) of these households report almost never using these services.

Child food security levels also in Table 11, in general, show that frequency of use of these services is positively associated with prevalence of very low food security and food insecurity among children. Roughly three percent of households that report using a check casher at least once or twice a year have very low food secure children and approximately 20 percent have children with low food security (Columns 1 and 2). Households that almost never use non-bank check cashing show far lower rates of food insecurity among children with 0.4 percent of households experiencing very low child food security (Column 3). For households that ever use non-bank money orders, 3.0 percent of households that use a non-bank money order at least a few times a year have children with very low food security (Column 4) and less than one percent (0.8 percent) of households that almost never use non-bank money orders have children with very low food security (Column 6).

Consistent with these food security outcomes, use of food assistance programs rises with more frequent use of both non-bank check cashers and non-bank money orders. For example, 38.4 percent of households using non-bank check cashing services at least a few times a year receive SNAP benefits while only 20.8 percent of households that almost never use non-bank check cashing service receive SNAP benefits. Similarly, 36.8 percent of households that use non-bank money orders at least a few times a year receive SNAP benefits while only 9.5 percent of households that almost never utilize non-money orders.

I control for observable characteristics by estimating Equation 14. Estimates are provided for both ever using a non-bank check casher or non-bank money order and the frequency of their use in Table 12. Looking specifically at financial transaction products, rather than all AFS products, shows no relationship between the number of these financial transaction products used and very low food security among children (Column 1). The point estimate is both small and statistically insignificant.

Next, non-bank check cashers and non-bank money orders are examined separately to determine the size of the relevant relationship on very low food security among children. Neither the use of a non-bank check casher nor a non-bank money order (Columns 2 and 3) has any important statistical or economic relationship with very low food security. In Columns 4 and 5, I treat households that report "almost never" using these products similarly to those that never used these products. This parameterization is more likely to measure use of these products over the same period as the food security measure. But, as before, there is no significant or important relationship between use of these AFS products and very low food security.

In the remaining columns of Table 12, I repeat the analysis but examine food insecurity among children. In these estimates, the effect of each of these products is positive and statistically significant. Ever using either AFS financial transaction products is associated with a significant 3.6 percentage point increase in food insecurity among children (Column 6). Ever using a check casher is significantly associated with an increased probability of food insecurity of children of nearly 7 percentage points (Column 7) while ever using a non-bank money order is associated with a significant increase in food insecurity of 3.5 percentage points (Column 8). Finally, in Columns 9 and 10, "almost never" users are treated as those who never used either of these products. The estimated effects for both non-bank check cashers and non-bank money orders are similar to earlier estimates with a 7.1 percentage point and 4.3 percentage point increase for non-bank check cashers and non-bank money orders, respectively. Thus, it does not appear as if treating rare users of these products similar to regular users of these products produces substantial bias.[5]

[5] I also investigated the frequency of use more directly with a series of indicators for the reported frequency of use. There is little relationship between the frequency of use of either non-bank check cashing services or non-bank money orders and very low food security of children. But, compared to those that report never using a non-bank check casher, any frequency of use is significantly and positively related to food insecurity of children. Point

The differences in these findings when examining very low food security among children and child food insecurity could be explained by the relatively low cost of these services. Perhaps fees for these products are not large enough to produce an outcome as extreme as very low food security but could cause a shift to food insecurity. The larger point estimates for non-bank check cashers compared to non-bank money orders may be the result of non-bank check cashing services existing more on the "fringe" of financial services. Many adults required a money order at one time to secure an apartment or pay a bill. In fact, available at U.S. Post Office branches and convenience stores, non-bank money orders are available in neighborhoods in all sociodemographic levels.

Still, the relationship between food security and use of AFS products that provide basic financial transactions is somewhat puzzling because these products are often freely provided with a bank account. Moreover, although I estimate that unbanked households are 28 percentage points more likely to use a non-bank check cashing services and 20 percentage points more likely to use a non-bank money order, both banked and unbanked households use these products. If use of these products among unbanked households has any important relationship on the risk of child food insecurity, it suggests that children in these households may be better off if their parent owned a bank account. If banked households utilize these services and it affects the probability of child food insecurity, it suggests poor financial management skills, bank accounts that are inadequate for their needs, high transportation costs to travel to a bank, or a need for liquidity that the immediate clearing of the check would provide.

I explore if differences exist between banked and unbanked households in the relationship between the use of AFS transactional products and child food security outcomes in Table 13. I find that for unbanked households, the relationship between the use of non-bank check cashers, non-bank money orders, and either food security outcome is statistically insignificant. Positive and statistically significant relationships, however, are found among the sample of banked

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estimates range from 5.7 points for at least a few times per year to 10.3 points for once or twice a year to 5.5 points for almost never. None of these point estimates on the frequency of use are statistically different. For non-bank money orders, frequency of more than at least once or twice a year is significantly related to food insecurity, on the order of 3.6 to 5.2 percentage points. The point estimates between at once or twice a year and at least a few times a year do not significantly differ. These results are available from the author.

households for the food insecurity outcome. The estimated relationship between non-bank money orders and child food insecurity outcomes is smaller than the relationship for check cashers. While the coefficient estimates are not significantly different between banked and unbanked households for each outcome, the number of unbanked households is relatively small.

In sum, this provides weak evidence that for unbanked households, use of these products is unrelated to declining food security levels of children. One explanation for the effects on banked households is that use of these providers for banked households is indicative of liquidity constraints. Banked households may use a non-bank check casher so they can get their money faster, given the holds that banks may place on a deposited check, particularly for households with a history of overdrawing their account or otherwise poor credit. Or, households may have poor financial skills and do not optimally utilize services provided by banks. Finally, convenience could be another reason for use of these services. If a bank branch is not located close to where the respondent lives or works, the costs of transportation to a bank branch location may be high and the respondent may choose a check casher instead.

To explore these possible explanations I examine the main reason households report using financial transaction services at an AFS provider rather than at a bank into three possible reasons: economic, customer service, and other reasons. In Table 14, columns 1 through 3 provide tabulations of these reasons for non-bank check cashing services. For non-bank check cashers, the main reason for choosing this provider was evenly split between customer service reasons (45.9 percent) and economic reasons (44.1 percent). Ten percent of household volunteered another reason. Customer service reasons include convenience, fewer identification requirements and greater comfort with non-bank providers. Economic reasons include not owning a bank account, an immediate need to access the funds from the check, and the prices charged to cash checks at a bank.

Compared to those citing customer service reasons, households providing economic reasons for using a check casher rather than a bank have higher rates of very low food security among children (3.6 percent versus 1.5 percent) and higher rates of child food insecurity (25.2 percent versus 16.4 percent). Greater participation in SNAP and other food assistance among households that cite economic reasons suggest that households relying on check cashers for economic

reasons are facing greater financial constraints. Thus, it seems likely for banked consumers using a non-bank check casher, liquidity constraints are important reasons for their food hardship.

Columns 4 through 6 of Table 14 provide tabulations of these reasons for non-bank money orders. Among this subsample, two-thirds of households use these providers rather than a bank due to customer service reasons (66.6 percent), including banks not selling money orders, convenience, and comfort. Far fewer households (23.2 percent) chose these services for the price charged by banks, the only economic reason households could cite. The remaining users of non-bank money orders (10.3 percent) volunteered another reason. As in the case of households that ever used a non-bank check casher, compared to households citing customer service reasons, households that ever chose to purchase a non-bank money order because of economic reasons exhibit higher rates of low child food security (18.3 percent versus 12.9 percent) and very low child food security (3.4 percent versus 1.5 percent). However, households that report prices for money orders as the main reason they chose to purchase this at a non-bank do have slightly higher rates of SNAP participation (29.6 percent versus 21.7 percent) and other food assistance programs.

AFS Products Providing Credit

I turn next to explore the effects of AFS products that provide credit on child food security in greater detail. These products include payday loans, pawn loans, rent-to-own agreements, and RALs. Recall from Table 10 that the simple cross-tabulations suggest that use of these products is associated with very low child food security and child food insecurity. I examine the use of these products on very low food security and food insecurity, controlling for observable characteristics, in Table 15.

In Column 1 of Table 15, I measure the association between use of any AFS product providing credit and very low food security of children. Ever using any of these AFS products is associated with a significant increase in the probability of very low food security among children of 1.4 percentage points. In Columns 2 through 5, I estimate the relationship for each of these products individually. Respondents that report ever using any these services are associated with positive, significant, and sizeable increases in the probability of very low food security among children: pawn shops by 3.4 percentage points (Column 2), payday loans by 1.8 percentage points

(Column 3), rent-to-own agreements by 1.8 percentage points (Column 4) and RALs by 1.8 percentage points (Column 5).

In the remaining columns, I repeat the analysis for the child food insecurity outcome. Estimates suggest even larger and more significant relationships. Using any AFS product providing credit is associated with a significant increased risk of child food insecurity of 6.7 percentage points. Using a pawn shop is related to an increase in the risk of food insecurity of 13.4 percentage points, payday loans are related by 11.9 percentage points, rent-to-own outlets by 6.6 percentage points and RALs by 10.3 percentage points. Although not causal, these large estimates may suggest that households with children need greater access to credit, whether because of an economic shock, volatile income, or lack of mainstream credit alternatives. However, other explanations include households making poor decisions due to lack of financial education or self-control problems.

The January 2009 CPS asked about the frequency of use for some of these credit products. More frequent reliance on these products could signal that households regularly struggle to meet their food needs. For pawn loans and rent-to-own agreements, respondents were asked to indicate if they utilized these services at least a few times a year, once or twice a year, or almost never.[6] In Table 16, I examine how the frequency of use for pawn loans (Columns 1 through 3) and rent-to-own agreements (Columns 4 through 6) relate to child food security outcomes. Overall, households that ever used a pawn shop or rent-to-own agreement do so less frequently than users of AFS products providing financial transactions. For both pawn loans and rent-to-own agreements, using these services at least a few times a year is relatively rare with just 14 percent using either of these products with that frequency. More than half (60.2 percent) of those using a pawn shop loan report almost never using this service and almost half (47.6 percent) of rent-to-own agreement users report this frequency.

Although frequent use of these products is relatively rare, a positive relationship exists between frequent use of these products and very low food security of children. In 14.4 percent of households that use pawn shops at least a few times a year (Column 1), children are very low food secure and another 36.2 percent are classified as low food security. Similarly, 9.2 percent of

[6] The January 2009 CPS did not ask about the frequency of use for RALs.

households that use rent-to-own agreements at least a few times per year (Column 4) have children that experience very low food security and 17.4 percent have children classified as low food security. These extremely high rates suggest that an unmet need for credit, poor financial management skills, or self-control problems among parents may play an important role in food insecurity among children.

The most frequent users of pawn shops and rent-to-own agreements are also most likely to participate in SNAP, most likely to have received emergency food. More than half (53.9 percent) of the most frequent users of pawn shops, 44.5 percent of less frequent users, and 26.3 percent of rare users participate in SNAP. But, rates of participation in other food assistance programs from WIC and free or reduced price School Meals are relatively similar between households that use pawn shops at least a few times a year and once or twice a year. Similarly, the more than half (56.1 percent) of the most frequent users of rent-to-own agreements utilize SNAP but only 39.9 percent of less frequent and 37.4 percent of rare users participate.

I examine if the large associations between frequency of pawn shop or rent-to-own contract use and child food security remains after controlling for other observable characteristics of the household in Table 17. Households that rarely use these services but still are shown to face food security problems suggest that these results may be related to infrequent economic shocks to these households. Therefore, I treat households that almost never use these services identically as households that report they never used these services. In Column 1, using a pawn shop at least a few times a year is related to a significant increased probability of very low food security of 5.6 percentage points while in Column 2, using a rent-to-own agreement at least a few times a year is not significantly related to very low food security. Thus, for both products, there is not that large of a change in the point estimate, although the rent-to-own coefficient is not longer statistically significant. This suggest that the more regular customers are facing food security problems.

Next, I investigate the frequency in greater detail because of the large magnitude of the effects. I divide users of into separate groups based on the reported frequency of use. Compared to those who never borrow, a positive relationship for pawn shop use and very low food security exists for each frequency of pawn borrowing, although borrowing once or twice a year is not statistically significant (Column 3). Households that most regularly rely on pawn loans are

associated with an increased risk of very low child food security of 12.0 percentage points and this estimate is significantly different from other frequencies. The magnitude of this effect is striking and suggests regular pawn borrowers are facing extreme needs. Compared to those that never borrow, those borrowing from a pawn shop once or twice a year is positive but not statistically significant. This lack of significance may be due to sample size or lack of variation as the point estimates between those that almost never borrow and those that borrow once or twice a year are not significant different.

In Column 4, I estimate the relationship between frequency of use for rent-to-own agreements and very low food security. Comparing rent-to-own users to non-users, only the use of a rent-to-own outlet at least a few times a year significantly increases the probability of very low food security of children. The estimate is 6.3 percentage points. Households that report almost never using a rent-to-own store or using a rent-to-own store only once or twice are not significantly related to the increases in very low food security of children. None of the point estimates that denote the frequencies of rent-to-own use are different. It may be that rent-to-own agreements are used by those who want higher levels of consumption on items that may not necessarily be necessities. In contrast, pawn shop customers may be in great need of for cash to purchase necessities. Thus, using a pawn shop at any time is highly associated with child food insecurity.

Expanding the outcomes to child food insecurity in Columns 5 through 8, finds even larger and more significant relationships for these products. For pawn shops, any regular use of a pawn shop for credit is associated with an increased probability of child food insecurity of 17.0 percentage points while any regular use of a rent-to-own agreement is associated with a significant 9.7 percentage point increase in child food insecurity. These estimates are confirmed in Columns 7 and 8 when the frequency of pawn loan use is detailed. For the most frequent pawn borrowers, the associated risk of child food insecurity rises to 28.8 points, compared to those that never borrow. For rent-to-own customers, rarely using the product is associated with a large and significant increase in the probability of food insecurity among children of 10.0 percentage points. While this is an odd result, the point estimate for rare users is not statistically different from those who use with other frequency.

In short, it appears that any level of borrowing from a pawn shop that is associated with an increased risk of very low food security and food insecurity. Perhaps one reason is that not only is the pawn loan for a relatively small amount, but the household must give up possession, at least temporarily, of the good used as collateral. In contrast, there does seem to be an increase in the risk of very low food security among children the more frequently a household utilizes this service, but the results aren't consistent across specifications. One explanation is that, perhaps, even if over the long-term the rent-to-own item ends up costing many times what it would to purchase it at a store, the payments are broken down to more manageable amounts that could fit into an LMI household's budget.

Why do Households Use a Pawn Loan Rather than a Bank?

With the large correlations found between pawn borrowing and child food security, I examine the main reason that households provide for borrowing from a pawn shop rather than a bank.[7] In Table 18, after grouping these responses into three reasons: economic, customer service, and other. Economic reasons include inability or difficulty in qualifying for a bank loan while customer service reasons include the lack of small loans offered by banks, discomfort with banks, or convenience of pawn shops.

The main reason households use pawn loans rather than bank loans are nearly evenly split between economic reasons (45.4 percent) and customer service reasons (39.1 percent). However, households that utilize pawn shops for economic reasons are significantly more likely to have very low food security among children than those citing customer service reasons (8.1 percent versus 1.9 percent), and much more likely to have low food secure children (30.9 percent versus 22.0 percent). Households citing economic reasons also have relatively high participation rates in SNAP but the differences in participation rates across reasons for pawn borrowing are smaller than the child food security rates would suggest. For example, 42.0 percent of those utilizing pawn shops for economic reasons participate in SNAP while 37.7 percent of those using these providers for customer service reasons participate in SNAP.

Intensity of Payday Loan Borrowing

The final AFS product providing credit services that I can explore in greater detail is payday loans. Unlike questions regarding the frequency of other AFS products, for payday loan users,

[7] This question was not asked for rent-to-own agreements.

the CPS asked the household how many times over the past 12 months they used a payday loan.[8] This detail allows the timing of the payday loan to be tied more closely to the timing of the food security measure. Additionally, as a continuous measure, it improves the understanding of how frequency of use affects child food security.

In Table 19, I group the range of responses – zero through twenty – using the distribution in the data. Only 10.0 percent of households report ever using a payday loan but not in last 12 months (Column 1) and more than one-third (34.6 percent) report using a payday loan exactly once in the past 12 months (Column 2). Slightly less than forty percent of payday loan users used a loan twice in the past 12 months (18.0 percent) or three to five times in the past 12 months (18.9 percent). The remaining households use payday loans very frequently, ranging from six to ten times in the past 12 months (10.0 percent), eleven to fifteen times in the past 12 months (4.4 percent) and sixteen to 20 times in the past 12 months (4.1 percent).

In general, the more frequently households utilized payday lenders over the past 12 months, the greater the prevalence of very low food security among children and the greater the food insecurity of these children. Households that report ever using a payday loan but not in the last 12 months (Column 1) exhibit the lowest rates of child food insecurity at 7.7 percent. None of these households contain children with very low food security. Within households that also used a payday loan infrequently, either once or twice over the past 12 months, roughly two percent contain children with very low food security. Households that use these loans the most frequently, sixteen or more times over the past 12 months, 8.3 percent contain children with very low food security (Column 7).

In contrast to the differences seen in very low child food security by frequency of use of payday loans in the past 12 months, participation in SNAP is relatively stable across these different households with approximately one quarter of households reporting receipt. There does, however, seem to be a relationship between food assistance programs targeted more explicitly towards children: School Meals and WIC. Households that ever reported using a payday loan but report using one five times or less in the past 12 months participate in WIC at a rate of 11 to 18 percent. But, households that report using a payday loan six or more times in the past 12 months

[8] Respondents were given direction to count a rollover loan as a new loan.

participate in WIC at a rate of 24 to 31 percent. Additionally, more than half of households at the upper tail of frequency of use of payday loans – eleven times or more in the past 12 month – receive free or reduced price School Lunch and nearly half receiving free or reduced price School Breakfast.

I examine the intensity of payday loan borrowing over the past 12 months affects child food security in a regression framework in Table 20. In Column 1, I estimate the association between the total number of payday loans during the past 12 months on very low food security of children. Each additional loan used is significantly related to an increased risk of very low food security among children of 0.4 percentage points. This estimate is large in magnitude as the overall very low food security rate is only 1.3 percent.

Because relationships may not be linear, I break the number of payday loans the household borrows over the past 12 months into a set of dichotomous variables: only one payday loan, only two payday loans, three to five payday loans, six to ten payday loans, eleven to fifteen payday loans, and sixteen through twenty payday loans. Compared to households that did not borrow from a payday lender during the last 12 months, using three to five payday loans over the past 12 months is associated with the greatest increase in risk of very low food security with a 5.0 percentage point increase (Column 2). Except for using one payday loan in the past 12 months, each level of frequency suggests a positive increase in the risk of very low food security, although the coefficients are not statistically significant.

I repeat the analysis for the food insecurity outcome and find larger effects. In Column 3, each additional payday loan increases the probability of food insecurity by 1.7 percentage points. Compared to those that did not borrow in the last 12 months, more payday loans, in general, is associated with an increased risk of food insecurity (Column 4). Households with one payday loan in the past 12 months significantly increase the probability of food insecure children by 7.8 percentage points, those with two by 14.1 percentage points, those with three to five payday loans by 18.8 percentage points, those with six to ten by 12.3 percentage points, and those with 11 to 15 by 24.6 points. For those with 16 to 20 payday loans, the point estimate suggests a 22.6 percentage point increase but just misses conventional significance levels ($p=0.12$). Each of these suggests a large and important relationship of payday loan use on child food insecurity.

Why do Households Use Payday Loans Rather than a Bank?

For those that reported ever using a payday loan, the CPS asked the main reason the household used this service rather than a bank. In Table 21, I examine the main reason for using payday lenders, grouping these into economic, customer service, and other reasons. For payday loans, economic reasons relate to difficulty or inability to qualify for a bank loan. Nearly two thirds (66.2 percent) of those ever using a payday loan rather than a bank do so for economic reasons. Most of the remaining users of payday loans (24.1 percent) use these products for customer service reasons, such as convenience and comfort.

Households using payday loans for economic reasons and for customer service reasons have nearly identical rates of very low food security among children at roughly four percent, but those citing economic reasons have far higher rates of low child food security than household citing customer service reasons (26.8 percent compared to 12.6 percent). No households citing other reasons for using a payday loan contain children with very low food security but 22.7 percent of these households contain low food secure children.

Despite differences in child food insecurity rates across households depending on why they used these services, all of these households report similar participation rates in SNAP and other food assistance programs. Compared to the 23.8 percent of households that use payday loans for customer service reasons, 27.6 percent of households that use a payday loan for economic reasons receive SNAP.

Do Households Use AFS Credit for Necessities Like Food?

To determine if the large correlations found between use of credit provided by AFS providers and child food insecurity are plausible, I examine the intended purpose of this borrowing. If households borrow for frivolous expenses, then the relationships found may not be the cause of child food security status but an indicator of some other factor. However, if the purpose of borrowing was to purchase necessities, it suggests that use of AFS credit can be tied directly related to child food security because households do use these products to purchase necessities like food.

The January 2009 CPS asked households that ever used a payday loan, pawn loan, rent-to-own agreement, or RAL the main purpose this credit was needed over the last 12 months. Table 22 presents this information. Households report using these products to make up for lost income (15.5 percent) or for purposes that could be characterized as necessities, such as basic living expenses (39.2 percent), house repairs or to purchase an appliance (8.7 percent), medical expenses (2.2 percent), car repairs (3.5 percent), and school or childcare expenses (1.3 percent). Only 6.5 percent reported a special gift or luxury purchase as the main reason for utilizing these services. Although almost one quarter (23.1 percent) of the sample volunteered another reason, even if all these households purchased something other than a necessity, more households would report using these products to pay for necessities and day-to-day expenses. Thus, these AFS products are generally not used for frivolous purchases and using an AFS product to ensure an adequate amount of food is a plausible use of these products.

I also examine how each of these purposes relates to child food security in Table 22. Households that report purposes that are most related to day-to-day expenses or emergencies have the highest rates of very low food security among children. These range from approximately 4 percent for lost income (Column 1), basic living expenses (Column 2), and car repairs (Column 5) to approximately 10 percent for medical (Column 4) and school or childcare expenses (Column 6). Notably, no households that report using these products for special gifts or luxuries (Column 7) had children with very low food security. Rates of low food security follow similar patterns with the greatest prevalence among households that utilized these products for necessities and the lowest prevalence among households that utilized these products for special gifts or luxuries.

Finally, I also examine use of food assistance programs by the main purpose that households used AFS credit. Approximately one-third of households that used any of these AFS credit products over the past 12 months due to lost income (31.9 percent), basic living expenses (37.5 percent), house repairs (35.0 percent) or medical expenses (36.3 percent) participate in SNAP. Households that reported any other reasons for using AFS credit are less likely to receive SNAP, with participation rates ranging from 15.5 percent for car repairs to 25.0 percent for special gifts or luxuries. Participation rates in other food assistance programs reflect a similar pattern of participation by reported purpose of AFS credit.

Is There a Causal Relationship between AFS Products and Child Food Security?

The relationships identified thus far have focused on correlations and have been unable to answer the question if use of AFS products causes very low food security among children or if households with very low food security among children are also more likely to use these products. The next set of estimates attempt to identify any causal relationships between the use of AFS products and very low food security among children and child food insecurity by using state laws to generate plausibly exogenous variation. Because a plausible and strong instrument could not be identified, I am unable to present any sort of causal analysis for non-bank check cashers, non-bank money orders, rent-to-own outlets, or RALs. But, for non-bank check cashers and rent-to-own outlets, I can present evidence about how state laws and regulations can affect the relationship between AFS product use and child food security.

Non-Bank Check Cashers

I begin with the use of non-bank check cashers. State laws that limit the fees non-bank check cashing services can charge could potentially serve as an instrument, but estimates are not statistically significant enough to avoid the weak instrument problem. Instead, I determine if there is a different effect of using a non-bank check casher in states with and without these laws by interacting these laws with use of a non-bank check casher in Table 23. Recall from earlier that the expected effect of regulating check cashers is to reduce the supply of these providers because households are relatively price inelastic.

Estimates for the effect of non-bank check cashers in both types of states are statistically insignificant. For states with regulation, the estimates are practically zero for very low food security while in those that do not, the point estimates suggest a reduction in very low food security of 1.2 percentage points. For food insecurity (Column 2), estimates are larger in magnitude and significant for states that regulate check casher fees. Households using a check casher in states that regulate check cashing services are associated with significant increases in child food insecurity of 7.2 percentage points, significant at the one percent level. Meanwhile, households that utilize check cashing services in unregulated states are associated with declines in food insecurity, although the estimate is not statistically significant. For households needing immediate access to the funds from their check, the fewer the number of non-bank check cashers, the greater the limit on their ability to maintain enough money for food.

Pawn Shops

To examine causal effects of pawn use, I utilize two potential instruments: state laws requiring pawn shops to return excess proceeds from the sale of the pawned item and state laws limiting interest and other fees for pawn loans. To capture state laws limiting interest and other fees, I create a dichomotous variable based on calculations by Avery and Samolyck (2011) that interest and other fees on a hypothetical two-month, $80 pawn loan are less than $10. Pawn consumers are relatively inelastic and both instruments reduce the supply of pawn shops (Shackman and Tenney 2006; Avery and Samolyck 2011). Shackman and Tenney (2006) find that state interest rate ceilings and rules requiring pawnshops to return excess proceeds from the sale of collateral items reduce the supply of pawnshops, measured on a per capita basis.

In Table 24, I estimate 2SLS models. I include the first stage results (Panel A), the reduced form results (Panel B), and the IV results (Panel C). In Panel A, both policies significantly reduce reported use of pawn shops. State policies that limit the charges on an $80 loan to $10 or less reduces use of pawn loans by 3.5 percentage points (Column 1) while rules that require pawn shops to return excess proceeds from the sale of a good reduces use of pawn loans by 4.6 percentage points (Column 2). With both policies in the first stage regression (Column 3), coefficients remain significant but fall slightly in magnitude. In all three regressions, the F-statistic is 15.14 or greater, suggesting that the 2SLS specification will not face large bias due to the weak instrument problem.

In Panel B, I present reduced form estimates to provide initial evidence for the 2SLS estimates. State laws resulting in low costs for pawn loans are associated with small (0.2 percentage points) but significant declines in very low food security among children while excess proceeds rules are also associated with small (0.2 percentage points) but insignificant declines in very low food security. Include both policies together results in a similar but now insignificant effect for pawn loans but no statistically or economically important effect on excess proceeds rules. Reduced form estimates for food insecurity find larger and more significant effects when these policies are explored separately: a significant decline of 1.4 percentage points for policies reducing costs and a significant decline of 1.3 percentage points for policies related to excess proceeds. When both

are included in the regression, however, point estimates remain negative but are no longer insignificant.

The final panel of Table 24 presents the 2SLS estimates. When policies limiting the cost of a loan are used, pawn shops have a large casual effect on very low food security among children, increasing very low food security among children by 9.4 percentage points and food insecurity among children by 38.1 percentage points. When excess proceeds policies are used as an instrument, pawn shops again have large causal effects on food insecurity but results are less significant: a positive but insignificant increased in very low food security of 5.1 percentage points and a positive and statistically significant effect on food insecurity of 26.9 percentage points. Finally, using both policies, pawn shops have a positive but not statistically significant effect on very low food security of 6.6 percentage points but a positive and significant effect for food insecurity of 30.7 percentage points.

While estimates across all specifications are not statistically significant for very low food security across all specifications, the point estimates are all positive, ranging from 5.1 to 9.4 percentage points for very low food security and 26.9 to 38.1 percentage points for child food insecurity. This suggests that borrowing from a pawn shop causes child food insecurity. One explanation for this is that that the parent is forced to give up a durable good of value to the household in exchange for roughly half of the item's resale value. Particularly for the unbanked, the assets of LMI households may hold their assets in non-liquid form. Surrendering the good for roughly half its face value may provide the household very little liquidity with which to purchase food and reduce the household's assets.

Rent-to-Own Agreements

States differ in the laws affecting rent-to-own requirements. I utilize state polices that require a lessor to disclose a standard set of information about the rent-to-own agreement related to the full purchase price on the product label (McKernan et al. 2003). This additional information should reduce the uncertainty about the price the customer will pay, particularly for those with low levels of financial education and knowledge.

I run regressions separately by state disclosure requirements to determine if there is a different relationship between rent-to-own use and child food security, depending on how much

information the customer is given about the full purchase price. Estimates are presented in Table 25, with Columns 1 and 2 presenting the effects on very low food security and Columns 3 and 4 presenting the results for food insecurity.

Beginning with very low food security among children, estimates in both states with and without disclosure requirements are relatively similar with approximately a 1.7 percentage point increase in the risk of very low food security. While the estimate in states with disclosure requirements is statistically significant and those without disclosure requirements are not statistically significant, the smaller sample size for states without disclosure requirements could explain this lack of precision.

Expanding the outcome to child food insecurity, I find positive and significant estimates in states with and without disclosure requirements. A rent-to-own agreement in a state without a disclosure requirement is associated with a 25.8 percentage point increase in child food insecurity while in a state with a disclosure requirement, the relationship is only 5.9 percentage points. The smaller point estimate in states with disclosure requirements could be that these disclosure requirements help to solve the customer's information and self-control problems (Zikmund-Fisher and Parker, 1999). In other words, once the customer knows the true full price of the item, some whose lease would reduce their ability to acquire enough resources for food may reconsider entering into the agreement and are able to use those funds for necessities.

Payday Loans

Finally, I estimate 2SLS models for the effect of payday loans on very low food security of children. For instruments, I utilize state laws and regulations that ban payday loans either implicitly or explicitly. As of 2008, 37 states had such a law or regulation that limits consumer access to payday loans, although somewhat imperfectly given that some consumers can drive across state lines to access these loans or borrow on the internet. Because I seek to measure payday loan use over the same period as food security is measured, I only treat those households that report using one or more payday loans over the last year.[9]

[9] In practice, this matters little for the empirical estimates. Estimates are nearly the same if payday loan use is measured as households reporting they ever used a loan or measured as reporting they used a payday loan over the last 12 months.

The 2SLS results are shown in Table 26. In Panel A, households living in states with a payday loan ban significantly reduces the probability a household used a payday loan in the last year by 4.2 percentage points. In Panel B, neither relationship is statistically significant. The point estimate for payday lending bans on very low food security is basically zero and the point estimate for payday lending bans on food insecurity is small. There is no economic or statistical relationship with state payday lending bans and very low food security of children. The point estimate for the effect of payday loan bans on child food insecurity is negative, but small and statistically insignificant.

Given the reduced form results, it is not surprising that the 2SLS estimates are insignificant in Panel C. The point estimates on very low food security and food insecurity, however, are opposite in sign. This implies, if there were greater precision, payday loans could have a different effect on those at different margins of food insecurity. For example, for those that infrequently use a payday loan, it could immediately reduce child food insecurity by providing liquidity to purchase necessities. With frequent use or measured over a longer term, it could increase child food insecurity due to debt.

The lack of clear causal results on payday loan use is consistent with the literature. Payday loans in particular could have ambiguous effects on economic well-being: they could improve well-being by providing short-term liquidity to manage an economic shock but could diminish well-being by creating unmanageable debt. Work examining high-cost, short-term loans, in general, reaches mixed conclusions. Karlan and Zinman (2010) find increases in food consumption after receiving a high-cost loan but Melzer (2011) finds no significant relationship between high-cost loans and food hardship. For payday loans, specifically, empirical findings are generally mixed on the effects of payday loans on these outcomes (Campbell et al., 2008; Karlan and Zinman, 2010; Melzer, 2011; Melzer and Morgan, 2009; Morgan and Strain, 2008; Morse, 2009; Skiba and Tobacman, 2007; Zinman 2010). But, the only study to specifically examine the effect of payday lending and food security by Fitzpatrick and Coleman-Jensen (2013) finds that among all households, payday loan use improves well-being by reducing the likelihood a household will be classified as not food secure. The more narrowed sample and more extreme outcomes examined in this project could explain the different results.

Organization of Household Finances

Sharing of Finances

The final set of decisions I consider are decisions related to household financial organization for households with two adults. First, I examine the decision to share finances for those with more than one adult with basic descriptive statistics in Table 27. For households with more than one adult, respondents could indicate if the adults have shared finances, the adults in the household have some shared and some separate finances, or the adults have separate finances even though they share a living space. Respondents could also volunteer that they were the only adult in the household. More than two-thirds of respondents (68.0 percent) indicated that the adults share their finances and less than 10 percent (9.7 percent) indicated that they separate their finances. Almost one-fifth (17.9 percent) falls between these two extremes, with respondents indicating that they share only some of their finances. Few households (4.4 percent) indicate that they are the only adult in the household.

As the conceptual model suggested, sharing of finances is associated with child food security. Households that share finances have low rates of very low food security among children (0.8 percent) and low rates of food insecurity (7.1 percent). But, there does not seem to be a relationship between the extent of financial sharing and child food security. Households that share all finances appear very similar to households that maintain some shared and some separate finances.

In contrast, households where adults have separate finances (Column 4) have much higher rates of very low food security and low food security than households that have at least some sharing of finances. In households where respondents indicate they maintain separate finances, despite sharing living space, children experience low food security at a rate of 11.2 percent and very low food security at a rate of 3.3 percent. These rates are roughly double the rates of households that maintain at least some shared finances.

Households with all shared finances and households with some shared and some separate finances look similar in their use of food assistance. The use of food assistance is greater among households where adults maintain separate finances than households that share some or all their finances, surprising fact given that eligibility for food assistance requires households to pool the resources of all adults in the household. Compared to households that share at least some of their

finances, SNAP participation over the past 12 months is more than two times greater (21.6 percent compared to 8.5 percent), WIC participation over the past 30 days is roughly double (14.2 percent compared to 7.4 percent), receipt of free or reduced price School Lunch is more than twice as high (32.4 percent compared to 13.9 percent), receipt of free or reduced price School Breakfast is more than double (25.5 percent compared to 9.8 percent), and receipt of emergency food from a non-profit (8.0 percent compared to 4.0 percent).

Table 28 presents the results for how resource sharing affects child food security outcomes. I measure resource sharing in two ways: a dichotomous variable indicating that adults in the household report all shared finances and a dichotomous variable indicating that adults in the household share at least some finances. In Columns 1 and 2 of Table 28, the very low food security among children outcome is considered. When adults share all finances, it is associated with a significant reduction in very low food security among children of nearly one percentage point (Column 1). In Column 2 the financial sharing is measured as households that share at least some of their finances and the relationship is slightly larger with an associated decreased of slightly more than one percentage point. With rates of child food security in the overall sample at 1.3 percent, this is a large reduction in this probability. Thus, it appears that the extent of financial resource sharing is not as important as long as there is some resource sharing – maintaining separate finances is associated with higher rates very low food security among children.

In Columns 3 and 4, food insecurity among children is estimated. None of these outcomes are statistically significant or large in magnitude. All point estimates are negative and larger negative estimates are found for sharing at least some finances, compared to sharing all finances. Thus, there does seem to be an association between the sharing of at least some financial resources and improvements in food security status of children even if it is imprecisely measured.

Next, I investigate if the gender of the respondent matters in Table 29. I examine how the observed differences in child food insecurity and use of food assistance by households that make different decisions related to financial organization are affected by the gender of the respondent. I limit the sample of households with more than one adult to the 78 percent of households that had the same respondent in both the December 2008 CPS and January 2009 CPS to keep the

respondent's gender constant and eliminate any bias generated from changing respondents. Of all households with more than one adult, 26.8 percent had the same male respondent in both months while 51.3 percent were the same female respondent in both months. The remaining households with more than one adult changed respondents between the December 2008 CPS and the January 2009 CPS.

In Table 29, I examine how males and females that report different levels of household financial resource sharing look on food insecurity of children, and use of food assistance. In these simple cross-tabulations, there does not appear to be a protective effect of gender on food security among children. Within each level of resource sharing, rates of low food security and very low food security among children are slightly higher for female respondents, compared to male respondents. For example, when females report shared finances, rates of food insecurity among children are 9.2 percent whereas when males report shared finances the rates are 5.5 percent. One possible explanation can be found from an examination of food security data in Canada. Matheson and McIntyre (2013) conclude that females report higher levels of food insecurity than males even when living in the same house.[10]

Gender does seem to play a role in reporting the receipt of food assistance with female respondents significantly more likely to report receiving food assistance. This may result from less measurement error as women in the household possessing more knowledge about food shopping and food spending than the male in the household. Females that share their finances report SNAP participation rates of 10.1 percent versus males report 6.8 percent. The same trend appears for all different types of financial resource sharing (some sharing and separate) but the results are even more dramatic: 23.8 percent of females with separate finances report receiving SNAP but only 9.7 percent of males with separate finances report receiving SNAP. These same trends also appear for other types of food assistance – free or reduced price meals, free or reduced price breakfast, and WIC.

I next turn to the extent it matters if men or women the sharing of finances. As described earlier, the literature that examines how expenditures on children relates to income pooling suggests that

[10] Canada uses the U.S. Department of Agriculture's Household Food Security Survey Module so food insecurity measures are directly comparable between the U.S. and Canada.

when women have control over finances, they are better able to spend money on children. I explore this in Table 30. I keep only those households where the same respondent in both months of the CPS and estimate separate models for male respondents and female respondents separately and examine the decision to pool at least some finances.

The first two columns of Table 30 show the results for complete sharing of financial resources on very low food security of children. For very low food security among children (Columns1 and 2), at least some sharing of finances continues to suggest a protective effect on children. Female respondents are associated with larger reductions in very low food security than male respondents, although neither estimate is statistically significant. In Columns 3 and 4, I examine child food insecurity. Comparing females and males based on at least some sharing of financial resources, the effect for females is a large, negative, and significant relationship of 4.9 percentage points between sharing at least some finances and food insecurity among children while males is a positive, but insignificant. This is similar to Kenney (2008), who concludes that in two parent households that pool their financial resources, greater control of financial resources by the mother is associated with decreases in child food insecurity.

Overall, it appears that it is not important that the adults share all financial resources, so long as they share at least some financial resources. In other words, the pooling of some resources is important because it allows the household to achieve some level of economies of scale. These economies may better meet the expenditure needs of these households. It also appears that when females have at least some control over financial resources, they may be able to direct those resources to food for their children.

Joint Participation in Financial Decisions

In Table 31, I also how much respondents in two adult households participate in the financial decisions of the household: a lot, some, or not at all. The vast majority of respondents (83.4 percent) report a lot of participation in financial decisions of households. The remaining respondents report some participation (16.0 percent). Very few (1.7 percent) report that they do not participate in the financial decisions of the household.

Respondents that report only some participation in the financial decisions of the household exhibit higher rates of low food security compared to respondents in households that report a lot

of participation (10.4 percent versus 6.1 percent, respectively). Additionally, very low food security among children is slightly greater (1.6 percent in households with some participation compared to 0.7 percent in households with a lot of participation). Households that report no participation have child food insecurity rates similar to those that report some participation. These patterns also occur for household food security outcomes.

Examining the use of food assistance programs, respondents in households with less participation in financial decisions show greater use of food assistance than respondents in households with a lot of participation. The largest use of food assistance program is among the few households that report they do not participate at all in the financial decisions of the household.

Table 32 presents the regression results for child food security outcomes on the amount of participation in financial decisions in households with more than one adult. The extent of participation in household finances the respondent reports is measured in two ways: as a dichotomous variable indicating the respondent reports having “a lot” of participation in the financial decisions of the household and a dichotomous variable indicating the respondent reports having “some” or “a lot” of participation in the financial decisions of the household.

In Columns 1 and 2, I examine very low food security based on complete sharing of finances (Column 1) and at least some sharing of finances (Column 2). The point estimates for both measures of financial participation are negative and insignificant, although the point estimate for some or a lot of participation in the financial decisions of the household is larger with an associated reduction of two percentage points.

In Columns 3 and 4, I investigate the relationship between financial participation in the household and food insecurity of children. Respondents that report a lot of financial participation in the household are associated with a 2.6 percentage point decline in food insecurity among children. Respondents that report some or a lot of participation are associated with a smaller reduction in food insecurity among children at 1.4 percentage points, although the estimate is not significant.

Table 33 presents the same gender analysis for the amount of participation in the financial decisions of the household. There again does not seem to be a protective effect of gender on child food security. If anything, the rates of food insecurity among children tend to be slightly greater for females rather than males with the same level of financial participation in the household. For example, among females that report a lot of participation in the financial decisions of the household, rates of low child food security and very low food security among children are 7.3 percent and 0.8 percent, respectively. In contrast, for males that report a lot of participation, rates of low child food security and very low food security among children are 4.1 percent and 0.6 percent, respectively. The only level of participation where female report lower levels of child food insecurity than males are households that report they have no financial participation. However, extremely small sample sizes limit inference.

Females report slightly higher rates of the food assistance programs for any level of participation in household decisions, although the difference is greatest for those respondents that report a lot of participation in the financial decisions of the household. For example, females with a lot of participation in financial decisions of the household report SNAP receipt at 9.9 percent while males report SNAP receipt at 5.3 percent. These differences in report rates could be explained in the same way as for the amount of sharing of finances: either recall error or stigma.

In Table 34, I examine differences across gender for households with the same respondent in both months of the CPS. As before, I run separate regressions for households with male respondents and households with female respondents. I examine only the choice to participate “a lot” in the financial decisions of the household because, from earlier results, there is a relationship between “a lot” of participation and reductions in food insecurity. In Columns 1 and 2, I compare male and female respondents for the very low food security outcome. When males and females report “a lot” of participation in the financial decisions of the household, the point estimates are opposite in sign but only the male respondents achieve statistical significance. For males, “a lot” of participation in the financial decisions of the household is associated with a nearly one percentage point increase in very low food security. For females, “a lot” of participation is associated with a statistically insignificant decline in very low food security among children.

Columns 3 and 4 of Table 34 examine food insecurity. The relationship between "a lot" of participation and food insecurity is nearly identical for males and females – both point estimates are statistically significant and reveal a decline of 4 percentage points on food insecurity among children. The remaining columns of Table 34 present the results for children with marginal, low, or very low food security of children. For both males and females, "a lot" of financial participation is associated with statistically insignificant declines. Although insignificant, the estimated relationship for males is more than twice as large as that for females.

Based on the literature concerning the effect of female involvement in financial decisions affecting outcomes for children, the small magnitudes of these relationships and the lack of statistical significance are surprising. Explanations could be the relatively small sample sizes, limited number of possible answers, or progress made in gender equality.

DISCUSSION

The findings presented in this project provide insight into the potential impact that a parent's use of financial services and choices about financial organization may have on the food security status of children in the household. One key contribution of this project is to provide evidence on this relatively unexplored area of food insecurity. While the existing food safety net, particularly SNAP, reduces food insecurity among children, this research suggests that addressing childhood hunger requires a multifaceted approach that addresses the transactional, credit, and financial organizational needs of households.

Policymakers can use these results in several ways. First, policymakers should build on the success of the SNAP program to address the needs of children at-risk for food insecurity. Outreach related to SNAP and other food assistance programs should be better targeted based on bank account ownership and AFS use of the local population to ensure that parents are aware of food assistance resources available to them, including emergency food programs that could reach at-risk children. Federally-funded outreach, state outreach, and grants to local communities could target areas where many AFS providers, particularly pawn shops, are located because the analysis revealed that parents that use AFS products are more likely to have children that experience very low food security and food insecurity.

One of the major contributions of this project was to examine the unbanked population in detail.

I find that the unbanked have high rates of both SNAP receipt and very low food security but the formerly banked is at very high risk of experiencing food insecurity among children. This is especially true for households that the bank closed their account on their behalf. With the negative stigma associated with a bank closing the account and, therefore, likely misreporting of who closed the account, these relationships could be lower bound estimates. One way to better target these households for food assistance would be to explore utilizing database like ChexSystems, a system used by financial institutions to report individuals that experience overdrafts, insufficient-funds issues, or similar problems with bank account ownership. Using this database could provide information on where and when to intervene reach children at-risk for food insecurity.

Furthermore, the USDA and/or non-profit providers of food assistance should consider participating in state and local *BankOn* Initiatives. *BankOn* Initiative creates public-private partnerships to pair unbanked households with banks and credit unions offering low-cost accounts appropriate for needs of LMI households. These accounts typically are low-cost basic accounts that do not have a checkbook facility, making it difficult to overwithdraw the account. In addition, *BankOn* also provides financial education to improve financial management skills. Greater access to appropriate accounts may reduce some reliance on AFS products and reduce credit costs for these households.

Additionally, across all types of households at-risk for child food insecurity, there appears to be substantial opportunities to teach financial management skills. In a sense, this work confirms previous work that finds financial management skills may play a role in preventing food insecurity and very low food security (see Dollahite et al., 2003; Dowler, 1997; Kenney, 2011; Olson et al., 2004). Attempts should also be made to incorporate financial literacy and financial management skills among households receiving food assistance so that these households can make better decisions regarding the type of financial services to use. Improving these skills could be accomplished with educational interventions through *BankOn* programs, the EFNEP, and/or educational programs in place for SNAP participants. For example, because the SNAP EBT card in many ways functions similarly to a debit account, introducing households entering SNAP to basic financial skills may improve outcomes and assist households with basic financial management skills.

Additionally, throughout this project, I find an unmet need for credit exists. Ensuring that households with children at-risk for food insecurity have access to liquidity is important. One source of liquidity that may help households is bimonthly distribution of SNAP benefits, as has been suggested by others including Shapiro (2005). Another source would be to work with the new Consumer Financial Protection Bureau (CFPB) to develop lower cost short-term credit for households that would otherwise utilize credit from payday lenders or pawn shops.

While it is beyond the scope of this project to examine SNAP use in detail, it is important to note that high rates of SNAP receipt among the unbanked pose difficulties for program administration because even if the unbanked would have little in liquid assets, accurate asset verification is more difficult and costly when households do not maintain a bank account. Additionally, one potential concern is that some households exit the banking system in an attempt to hide assets to ensure eligibility before even applying for SNAP. This research suggests that closing a bank account may negatively affect food security. More research is needed to examine this possibility but SNAP administrators should clearly articulate the asset tests households will face and encourage these households to maintain a bank account throughout any period of SNAP receipt.

CONCLUSION

All households face common financial decisions which could alter the risk of food insecurity for their children. Using data from the December 2008 and January 2009 CPS, this study explored the determinants of very low food security and food insecurity among children as they relate to the use of financial services and household financial organization. I find evidence that a large portion of households with children choose not to own a bank account and an even larger portion choose to use AFS products providing basic financial transactions and/or credit. These decisions can have important consequences on the food security status of children.

I find strong evidence that forgoing a bank account or using an AFS product is correlated with food-related hardship. Evidence that these behaviors cause food insecurity among children depends on the product. In simple cross-tabulations, unbanked households are more likely to experience very low food insecurity among children and to rely on food assistance programs to meet food needs. Previously banked households appear the worst off. Households that ever used

AFS products also appear to face food-related distress, although not to the extent as the unbanked or previously banked.

Low-income households potentially face great difficulties operating with the constraints of their budget. Poor financial management skills may make this task more difficult. Improving financial management skills, appropriate bank accounts, and short-term credit sources among this population with high rates of food insecurity is one potential role for public policy.

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Table 1. Summary Statistics for Sample of Households with Children, by Financial Decisions, Weighted

	All	Unbanked	Banked	No AFS	Any AFS
	(1)	(2)	(3)	(4)	(5)
Demographic Characteristics					
Age of Primary Earner	40.240	36.282	40.656	41.134	38.939
	(10.219)	(11.637)	(9.969)	(9.758)	(10.724)
Age of Oldest Child	10.196	9.540	10.265	10.290	10.058
	(5.140)	(5.170)	(5.132)	(5.142)	(5.134)
Coupled	0.690	0.360	0.724	0.760	0.588
	(0.463)	(0.480)	(0.447)	(0.427)	(0.492)
Single Parent	0.310	0.640	0.276	0.240	0.412
	(0.463)	(0.480)	(0.447)	(0.427)	(0.492)
White	0.788	0.590	0.808	0.811	0.753
	(0.409)	(0.492)	(0.394)	(0.391)	(0.431)
Black, Non-Hispanic	0.134	0.332	0.114	0.106	0.182
	(0.341)	(0.471)	(0.317)	(0.302)	(0.386)
Hispanic	0.175	0.377	0.154	0.159	0.198
	(0.380)	(0.485)	(0.361)	(0.366)	(0.399)
Native Born Citizen	0.823	0.710	0.835	0.797	0.861
	(0.381)	(0.454)	(0.371)	(0.402)	(0.346)
Economic Characteristics					
Less than High School	0.069	0.306	0.044	0.050	0.096
	(0.253)	(0.461)	(0.204)	(0.217)	(0.295)
High School	0.219	0.407	0.200	0.173	0.287
	(0.414)	(0.492)	(0.400)	(0.378)	(0.452)
Some College	0.319	0.251	0.326	0.288	0.364
	(0.466)	(0.434)	(0.469)	(0.453)	(0.481)
Household Income Under 50% of Poverty	0.061	0.303	0.035	0.037	0.094
	(0.239)	(0.460)	(0.184)	(0.190)	(0.292)
Household Income 50% -100% of Poverty	0.090	0.284	0.070	0.061	0.133
	(0.287)	(0.451)	(0.255)	(0.239)	(0.340)
Household Income 100% - 130% of Poverty	0.083	0.161	0.075	0.064	0.112
	(0.276)	(0.368)	(0.264)	(0.244)	(0.315)
Household Income 130% - 185% of Poverty	0.083	0.069	0.084	0.065	0.109
	(0.276)	(0.254)	(0.278)	(0.246)	(0.312)
Household Income Above 185% of Poverty	0.589	0.095	0.640	0.665	0.477
	(0.492)	(0.293)	(0.480)	(0.472)	(0.500)
Missing Household Income	0.094	0.088	0.095	0.108	0.074
	(0.292)	(0.284)	(0.293)	(0.311)	(0.262)
Member of Household in Armed Forces	0.014	0.003	0.015	0.012	0.016
	(0.115)	(0.054)	(0.120)	(0.107)	(0.127)
Employed Full-Time	0.840	0.495	0.877	0.876	0.787
	(0.366)	(0.500)	(0.329)	(0.329)	(0.409)
Employed Part-Time	0.057	0.130	0.049	0.048	0.070
	(0.232)	(0.337)	(0.216)	(0.214)	(0.255)
Unemployed	0.038	0.133	0.028	0.022	0.061
	(0.191)	(0.340)	(0.165)	(0.147)	(0.239)
Not Employed, Disabled	0.023	0.083	0.017	0.017	0.031
	(0.150)	(0.276)	(0.129)	(0.131)	(0.174)
Not Employed, Retired, or Out of Labor Force	0.042	0.158	0.029	0.035	0.051
	(0.200)	(0.365)	(0.169)	(0.185)	(0.219)
Local Characteristics					
State Unemployment Rate	5.771	5.772	5.770	5.806	5.719
	(1.098)	(1.009)	(1.107)	(1.106)	(1.084)
Number of Banks per 1,000 Persons Over Age 16	0.418	0.406	0.416	0.414	0.418
	(0.122)	(0.117)	(0.122)	(0.121)	(0.122)
Observations	9,253	742	8,511	5,589	3,664

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard errors provided in parentheses. Households that used AFS products include those report ever using a payday loan, ever using a non-bank check casher, ever using a non-bank money order, ever using a pawn shop, ever entering into a rent-to-own agreement, or using an RAL in the last five years.

Table 2. Summary Statistics for Households with More than One Adult, by Organization of Household Finances

		Household Finances			Participation in Financial Decisions		
	Overall	Shared	Some Shared	Separate	A Lot	Some	None
	(1)	(2)	(3)	(4)	(6)	(7)	(8)
Same Respondent, Both Surveys	0.785 (0.411)	0.769 (0.422)	0.800 (0.400)	0.798 (0.402)	0.784 (0.411)	0.737 (0.440)	0.652 (0.478)
Female Respondent, Both Surveys	0.513 (0.500)	0.489 (0.500)	0.505 (0.500)	0.579 (0.494)	0.500 (0.500)	0.278 (0.448)	0.468 (0.501)
Demographic Characteristics							
Age of Primary Earner	40.779 (10.115)	40.180 (9.506)	41.800 (10.850)	42.078 (12.493)	40.605 (9.766)	40.085 (10.049)	41.462 (10.231)
Age of Oldest Child	10.352 (5.255)	10.155 (5.218)	9.987 (5.332)	10.468 (5.247)	10.110 (5.257)	10.044 (5.173)	11.785 (5.012)
Married Couple	0.782 (0.413)	0.886 (0.318)	0.778 (0.416)	0.383 (0.486)	0.870 (0.336)	0.838 (0.369)	0.762 (0.428)
White	0.809 (0.393)	0.839 (0.367)	0.785 (0.411)	0.710 (0.454)	0.835 (0.372)	0.796 (0.403)	0.770 (0.423)
African American, Non-Hispanic	0.113 (0.316)	0.083 (0.276)	0.132 (0.338)	0.196 (0.397)	0.091 (0.287)	0.100 (0.300)	0.180 (0.386)
Hispanic	0.176 (0.381)	0.164 (0.370)	0.158 (0.365)	0.270 (0.444)	0.144 (0.351)	0.252 (0.434)	0.266 (0.444)
Native Born Citizen	0.817 (0.387)	0.816 (0.388)	0.836 (0.371)	0.780 (0.414)	0.840 (0.366)	0.734 (0.442)	0.599 (0.492)
Economic Characteristics							
Less than High School	0.059 (0.235)	0.057 (0.231)	0.033 (0.179)	0.071 (0.257)	0.045 (0.208)	0.079 (0.270)	0.110 (0.315)
High School	0.209 (0.407)	0.201 (0.401)	0.179 (0.384)	0.273 (0.446)	0.185 (0.388)	0.252 (0.435)	0.250 (0.435)
Some College	0.313 (0.464)	0.298 (0.458)	0.306 (0.461)	0.435 (0.496)	0.298 (0.457)	0.309 (0.462)	0.273 (0.448)
Household Income Under 50% of Poverty	0.043 (0.202)	0.034 (0.182)	0.024 (0.153)	0.082 (0.274)	0.030 (0.171)	0.040 (0.197)	0.069 (0.254)
Household Income 50% - 100% of Poverty	0.081 (0.273)	0.074 (0.261)	0.060 (0.237)	0.129 (0.335)	0.065 (0.247)	0.096 (0.295)	0.111 (0.316)
Household Income 100% - 130% of Poverty	0.077 (0.267)	0.070 (0.255)	0.067 (0.251)	0.129 (0.335)	0.062 (0.242)	0.104 (0.306)	0.100 (0.302)
Household Income 130% - 185% of Poverty	0.083 (0.276)	0.083 (0.276)	0.083 (0.275)	0.098 (0.297)	0.078 (0.268)	0.103 (0.304)	0.134 (0.342)
Household Income Above 185% of Poverty	0.621 (0.485)	0.643 (0.479)	0.674 (0.469)	0.472 (0.500)	0.672 (0.470)	0.549 (0.498)	0.447 (0.499)
Missing Income	0.096 (0.294)	0.096 (0.295)	0.092 (0.289)	0.091 (0.288)	0.093 (0.290)	0.107 (0.310)	0.139 (0.347)
Military	0.015 (0.123)	0.016 (0.126)	0.022 (0.147)	0.003 (0.052)	0.017 (0.131)	0.015 (0.123)	0.024 (0.154)
Employed Full-Time	0.877 (0.328)	0.891 (0.311)	0.915 (0.279)	0.834 (0.372)	0.899 (0.301)	0.884 (0.301)	0.884 (0.320)
Employed Part-Time	0.047 (0.211)	0.045 (0.206)	0.034 (0.180)	0.062 (0.240)	0.040 (0.197)	0.040 (0.197)	0.051 (0.219)
Unemployed	0.030 (0.171)	0.030 (0.171)	0.021 (0.142)	0.029 (0.168)	0.027 (0.161)	0.027 (0.161)	0.031 (0.173)
Not Employed, Disabled	0.017 (0.130)	.0137 (0.116)	0.009 (0.095)	0.015 (0.123)	0.012 (0.109)	0.012 (0.109)	0.016 (0.126)
Not Employed, Retired or Out of Labor Force	0.029 (0.168)	.0205 (0.142)	0.022 (0.145)	0.060 (0.238)	0.021 (0.144)	0.021 (0.144)	0.019 (0.136)
Unemployment Rate	5.777 (1.103)	5.772 (1.126)	5.783 (1.056)	5.808 (1.066)	5.762 (1.113)	5.817 (1.091)	6.062 (1.225)
Observations	8,148	5,570	1,478	756	5,861	1,085	118

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Observations will not sum to the overall number due to non-response, volunteered responses, and routing of questionnaire.

Table 3. Food Security and Use of Food Assistance, by Bank Account Ownership and AFS Use

	All	Banked	Unbanked			Any AFS	No AFS
			All Unbanked	Previously Banked	Never Banked		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Child Food Security Status during 2008							
High Food Security	0.813	0.838	0.573	0.536	0.603	0.719	0.878
	(0.390)	(0.369)	(0.494)	(0.499)	(0.490)	(0.450)	(0.328)
Marginal Food Security	0.081	0.075	0.136	0.141	0.141	0.118	0.056
	(0.273)	(0.264)	(0.343)	(0.348)	(0.349)	(0.322)	(0.230)
Low Food Security	0.093	0.077	0.242	0.268	0.222	0.143	0.058
	(0.290)	(0.267)	(0.428)	(0.443)	(0.416)	(0.351)	(0.234)
Very Low Food Security	0.013	0.010	0.046	0.055	0.033	0.020	0.008
	(0.113)	(0.097)	(0.209)	(0.228)	(0.180)	(0.139)	(0.091)
Use of Food Assistance							
SNAP, Last 12 Months	0.139	0.098	0.526	0.562	0.502	0.230	0.076
	(0.346)	(0.298)	(0.500)	(0.497)	(0.501)	(0.421)	(0.266)
Emergency Food, Last 12 Months	0.054	0.042	0.166	0.171	0.168	0.096	0.026
	(0.226)	(0.202)	(0.372)	(0.377)	(0.374)	(0.294)	(0.158)
WIC, Last 30 Days	0.085	0.067	0.256	0.225	0.301	0.133	0.052
	(0.279)	(0.251)	(0.437)	(0.418)	(0.459)	(0.340)	(0.222)
Free/ Reduced Price NSLP, Last 30 Days	0.206	0.172	0.529	0.556	0.503	0.307	0.136
	(0.404)	(0.377)	(0.500)	(0.498)	(0.501)	(0.461)	(0.343)
Free/ Reduced Price NSBP, Last 30 Days	0.155	0.125	0.443	0.467	0.428	0.240	0.096
	(0.362)	(0.330)	(0.497)	(0.500)	(0.496)	(0.427)	(0.294)
Observations	9,229	8,497	740	373	338	3,573	5,425

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. AFS products include non-bank check cashers, non-bank money orders, payday loans, pawn loans, rent-to-own agreements, and RALs.

Table 4. Impact of Bank Account Ownership on Child Food Security

	Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)
Unbanked Household	0.017		0.046**	
	(0.010)		(0.021)	
Previously Banked Household		0.026*		0.083***
		(0.014)		(0.028)
Never Banked Household		0.004		0.004
		(0.013)		(0.030)
Married Couple	-0.006	-0.009**	-0.032**	-0.034**
	(0.005)	(0.004)	(0.014)	(0.014)
Single Parent	0.007	0.007	0.049***	0.048***
	(0.005)	(0.005)	(0.011)	(0.011)
African-American, Non-Hispanic	0.012*	0.011*	0.035**	0.032**
	(0.006)	(0.006)	(0.014)	(0.014)
Hispanic	0.002	0.004	0.017	0.020
	(0.006)	(0.006)	(0.014)	(0.014)
Native-born Citizen	-0.008	-0.007	-0.001	-0.001
	(0.005)	(0.005)	(0.012)	(0.012)
Oldest Child Aged 6 – 14	0.007**	0.007**	0.034***	0.035***
	(0.003)	(0.003)	(0.009)	(0.009)
Oldest Child Aged 15 - 17	0.021***	0.020***	0.049***	0.047***
	(0.005)	(0.004)	(0.011)	(0.011)
Primary Earner Age 30 - 39	0.005	0.004	-0.012	-0.012
	(0.005)	(0.005)	(0.013)	(0.013)
Primary Earner Age 40 - 49	-0.001	-0.001	-0.021	-0.019
	(0.006)	(0.006)	(0.014)	(0.014)
Primary Earner Age 50 - 59	-0.001	-0.001	-0.022	-0.021
	(0.007)	(0.007)	(0.016)	(0.016)
Primary Earner Age 60 +	-0.001	-0.001	-0.052**	-0.054**
	(0.009)	(0.009)	(0.026)	(0.026)
High School Graduate	0.029***	0.028***	0.012	0.006
	(0.008)	(0.008)	(0.023)	(0.024)
Some College	0.029***	0.026***	-0.001	-0.009
	(0.008)	(0.008)	(0.023)	(0.023)
College Graduate	0.025***	0.022***	-0.019	-0.026
	(0.008)	(0.008)	(0.024)	(0.024)
More than College	0.024***	0.021***	-0.037	-0.045*
	(0.008)	(0.008)	(0.023)	(0.023)
Employed Part-Time	-0.001	0.0001	0.014	0.014
	(0.008)	(0.008)	(0.020)	(0.020)
Unemployed	0.012	0.013	0.054*	0.053*
	(0.013)	(0.013)	(0.028)	(0.028)

Table 4 (cont'd)	Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)
Not Employed, Disabled	0.025	0.028	0.216***	0.216***
	(0.021)	(0.021)	(0.042)	(0.042)
Not Employed, Retired or Out of Labor Force	-0.003	-0.002	0.023	0.024
	(0.011)	(0.011)	(0.027)	(0.027)
Military	-0.008**	-0.007**	-0.058***	-0.057***
	(0.003)	(0.003)	(0.017)	(0.018)
Household Income 100% - 130% of Poverty	-0.020**	-0.020**	-0.050**	-0.055**
	(0.010)	(0.010)	(0.023)	(0.023)
Household Income 130% - 185% of Poverty	-0.024**	-0.023**	-0.098***	-0.102***
	(0.010)	(0.010)	(0.022)	(0.022)
Household Income Above 185% of Poverty	-0.036***	-0.034***	-0.168***	-0.171***
	(0.008)	(0.008)	(0.018)	(0.018)
Missing Household Income	-0.040***	-0.038***	-0.166***	-0.168***
	(0.008)	(0.008)	(0.020)	(0.020)
State Unemployment Rate in 2008	-0.005**	-0.005**	-0.007	-0.009
	(0.002)	(0.002)	(0.019)	(0.019)
Banks Per 1,000 Persons Over Age 16	-0.014	-0.014	-0.081**	-0.081**
	(0.013)	(0.013)	(0.038)	(0.038)
Constant	0.022	0.0231	0.233***	0.249***
	(0.017)	(0.018)	(0.085)	(0.085)
State Fixed Effects?	YES	YES	YES	YES
Observations	9,237	9,208	9,237	9,208
R-squared	0.04	0.039	0.138	0.141

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table 5. Food Security and Use of Food Assistance for the Previously Banked, by Time Unbanked and Choice to Close the Account

	Time Since Owned Account		Who Closed Account	
	Within Year	More than Year	Household	Bank
	(1)	(2)	(3)	(4)
Child Food Security Status during 2008				
High Food Security	0.533	0.538	0.563	0.406
	(0.501)	(0.500)	(0.497)	(0.495)
Marginal Food Security	0.111	0.153	0.165	0.109
	(0.315)	(0.361)	(0.372)	(0.315)
Low Food Security	0.298	0.256	0.218	0.391
	(0.459)	(0.437)	(0.414)	(0.492)
Very Low Food Security	0.058	0.053	0.054	0.094
	(0.236)	(0.225)	(0.226)	(0.294)
Use of Food Assistance				
SNAP, 12 Months	0.466	0.612	0.542	0.698
	(0.501)	(0.488)	(0.499)	(0.463)
Emergency Food, 12 Months	0.115	0.202	0.188	0.344
	(0.320)	(0.402)	(0.392)	(0.479)
WIC, 30 Days	0.204	0.239	0.219	0.266
	(0.405)	(0.428)	(0.415)	(0.445)
Free/Reduced Price NSLP, 30 Days	0.422	0.628	0.519	0.578
	(0.496)	(0.485)	(0.501)	(0.498)
Free/Reduced Price NSBP, 30 Days	0.323	0.546	0.413	0.516
	(0.470)	(0.499)	(0.493)	(0.504)
Observations	127	242	261	64

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Sample includes all previously banked households.

Table 6. Impact of Time Unbanked and Choice to Close the Account on Child Food Security

	Time Since Owned Account		Who Closed the Account	
	Very Low Food Security	Food Insecurity	Very Low Food Security	Food Insecurity
	(1)	(2)	(3)	(4)
Never Banked	0.004	0.004	0.004	0.005
	(0.013)	(0.030)	(0.013)	(0.030)
Previously Banked, Banked Within Last Year	0.030	0.129***	-	-
	(0.024)	(0.049)		
Previously Banked, Banked More than One Year Ago	0.024	0.062*	-	-
	(0.016)	(0.033)		
Previously Banked, Self-Closed	-	-	0.020	0.056*
			(0.015)	(0.029)
Previously Banked, Bank Closed	-	-	0.058	0.231***
			(0.038)	(0.071)
Observations	9,205	9,205	9,208	9,208
R-squared	0.04	0.04	0.04	0.143

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 7. Food Security and Use of Food Assistance, by Main Reason for Not Owning a Bank Account

	Previously Banked: Main Reason for Closing				Never Banked: Main Reason for Not Owning an Account			
	Economic	Financial Management	Customer Service	Other	Economic	Financial Management	Customer Service	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Portion of Subsample	38.80%	8.23%	7.45%	45.51%	52.79%	10.72%	16.38%	20.12%
Child Food Security								
High Food Security	0.567	0.601	0.352	0.587	0.500	0.655	0.688	0.687
	(0.499)	(0.504)	(0.488)	(0.495)	(0.502)	(0.483)	(0.468)	(0.468)
Marginal Food Security	0.199	0.075	0.118	0.136	0.167	0.037	0.186	0.141
	(0.402)	(0.271)	(0.329)	(0.345)	(0.375)	(0.191)	(0.393)	(0.352)
Low Food Security	0.174	0.193	0.530	0.230	0.301	0.240	0.126	0.146
	(0.382)	(0.406)	(0.510)	(0.422)	(0.460)	(0.433)	(0.335)	(0.356)
Very Low Food Security	0.060	0.131	-	0.047	0.031	0.069	-	0.026
	(0.240)	(0.347)		(0.213)	(0.175)	(0.256)		(0.159)
Use of Food Assistance								
SNAP, Last 12 Months	0.504	0.640	0.662	0.550	0.487	0.646	0.421	0.516
	(0.503)	(0.494)	(0.484)	(0.500)	(0.502)	(0.486)	(0.499)	(0.504)
Emergency Food, Last 12 Months	0.162	0.274	0.205	0.156	0.187	0.251	0.133	0.168
	(0.371)	(0.459)	(0.413)	(0.364)	(0.392)	(0.440)	(0.343)	(0.377)
WIC, Last 30 Days	0.213	0.264	0.036	0.213	0.272	0.230	0.280	0.396
	(0.412)	(0.454)	(0.191)	(0.411)	(0.446)	(0.427)	(0.453)	(0.493)
Free/Reduced Price NSLP, Last 30 Days	0.640	0.702	0.661	0.466	0.272	0.664	0.411	0.483
	(0.483)	(0.471)	(0.484)	(0.501)	(0.446)	(0.480)	(0.497)	(0.504)
Free/Reduced Price NSBP, Last 30 Days	0.520	0.629	0.576	0.356	0.432	0.596	0.361	0.389
	(0.503)	(0.497)	(0.505)	(0.481)	(0.497)	(0.499)	(0.485)	(0.492)
Observations	82	20	25	111	137	33	53	62

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Sample includes only unbanked households that either closed an account themselves or were never banked.

Table 8. Impact of State Banking Policies and Banked Status, on Child Food Security

	Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)
State Lifeline Legislation	0.002	-	-0.007	-
	(0.006)		(0.012)	
Formerly Banked, State Has Lifeline Legislation	-0.008	-	-0.039	-
	(0.042)		(0.077)	
Formerly Banked, State Doesn't Have Lifeline Legislation	0.026*	-	0.088**	-
	(0.014)		(0.030)	
Never Banked, State Has Lifeline Legislation	-0.020	-	-0.053	-
	(0.027)		(0.070)	
Never Banked, State Doesn't Have Lifeline Legislation	0.008	-	0.017	-
	(0.014)		(0.033)	
State Regulates Check Cashers	-	0.004*	-	0.009
		(0.002)		(0.008)
Formerly Banked, State Regulates Check Cashers	-	-0.019	-	0.024
		(0.030)		(0.057)
Formerly Banked, State Doesn't Regulate Check Cashers	-	0.038	-	0.066
		(0.026)		(0.048)
Never Banked, State Regulates Check Cashers	-	0.019	-	0.027
		(0.016)		(0.057)
Never Banked, State Doesn't Regulate Check Cashers	-	-0.011	-	-0.013
		(0.009)		(0.049)
Observations	9,208	9,208	9,208	9,208

Notes: Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA. Rather than state fixed effects, the equation includes three policies in effect in 2008: Maximum State EITC for two children, state minimum wage, and Democratic Governor. All coefficients reported relative to banked households. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 9. Impact of AFS Products on Child Food Security

	Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)
Ever Used Any AFS Product	0.004		0.045***	
	(0.003)		(0.008)	
Number of AFS Products Ever Used		0.006**		0.039***
		(0.002)		(0.005)
Married Couple	-0.006	-0.006	-0.034**	-0.036***
	(0.005)	(0.005)	(0.014)	(0.014)
Single Parent	0.007	0.006	0.046***	0.042***
	(0.005)	(0.005)	(0.011)	(0.011)
African-American, Non-Hispanic	0.014**	0.013*	0.036**	0.032**
	(0.007)	(0.007)	(0.014)	(0.014)
Hispanic	0.003	0.003	0.018	0.020
	(0.006)	(0.006)	(0.014)	(0.013)
Native-born Citizen	-0.008	-0.010*	-0.008	-0.013
	(0.005)	(0.005)	(0.012)	(0.012)
Oldest Child Aged 6 - 14	0.006**	0.006**	0.034***	0.032***
	(0.003)	(0.003)	(0.009)	(0.008)
Oldest Child Aged 15 - 17	0.020***	0.020***	0.048***	0.048***
	(0.005)	(0.005)	(0.011)	(0.011)
Primary Earner Age 30 -39	0.004	0.005	-0.012	-0.011
	(0.005)	(0.005)	(0.013)	(0.013)
Primary Earner Age 40 - 49	-0.002	-0.001	-0.020	-0.015
	(0.006)	(0.006)	(0.014)	(0.014)
Primary Earner Age 50 - 59	-0.002	-0.001	-0.022	-0.017
	(0.007)	(0.007)	(0.016)	(0.016)
Primary Earner Age 60 +	-0.002	-0.001	-0.057**	-0.050**
	(0.009)	(0.009)	(0.026)	(0.026)
High School Graduate	0.027***	0.027***	0.006	0.005
	(0.008)	(0.008)	(0.023)	(0.023)
Some College	0.026***	0.026***	-0.007	-0.007
	(0.008)	(0.008)	(0.023)	(0.023)
College Graduate	0.022***	0.023***	-0.021	-0.016
	(0.008)	(0.008)	(0.023)	(0.023)
More than College	0.021***	0.023***	-0.038*	-0.032
	(0.007)	(0.007)	(0.023)	(0.023)
Employed Part-Time	0.0002	0.0001	0.017	0.016
	(0.008)	(0.008)	(0.020)	(0.020)
Unemployed	0.014	0.012	0.055**	0.045
	(0.013)	(0.013)	(0.028)	(0.028)

Table 9 (cont'd)	Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)
Not Employed, Disabled	0.027	0.027	0.223***	0.225***
	(0.021)	(0.021)	(0.042)	(0.042)
Not Employed, Retired or Out of Labor Force	-0.0003	0.0002	0.034	0.036
	(0.010)	(0.011)	(0.027)	(0.027)
Military	-0.008**	-0.008**	-0.063***	-0.060***
	(0.003)	(0.003)	(0.018)	(0.017)
Household Income 100% - 130% of Poverty	-0.023**	-0.022**	-0.054**	-0.053**
	(0.010)	(0.010)	(0.023)	(0.023)
Household Income 130% - 185% of Poverty	-0.027***	-0.026***	-0.106***	-0.103***
	(0.010)	(0.010)	(0.022)	(0.022)
Household Above 185% of Poverty	-0.039***	-0.037***	-0.170***	-0.161***
	(0.008)	(0.008)	(0.018)	(0.018)
Missing Household Income	-0.041***	-0.039***	-0.165***	-0.155***
	(0.008)	(0.008)	(0.019)	(0.019)
State Unemployment Rate in 2008	-0.005**	-0.005**	-0.007	-0.008
	(0.002)	(0.002)	(0.019)	(0.019)
Banks, per 1,000 Persons Over Age 16	-0.014	-0.014	-0.082**	-0.080**
	(0.013)	(0.013)	(0.038)	(0.037)
Constant	0.028*	0.025	0.231***	0.221***
	(0.016)	(0.016)	(0.085)	(0.085)
State Fixed Effects	YES	YES	YES	YES
Observations	9,237	9,237	9,237	9,237
R-squared	0.039	0.041	0.141	0.151

Notes: Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 10. Food Security and Use of Food Assistance for Users of AFS products, by Product

	Financial Transaction Services		Credit Services			
	Check Casher	Money Order	Payday Lender	Pawn Shop	Rent-to-Own	RAL
	(1)	(2)	(3)	(4)	(5)	(6)
Among All AFS Users	31.43%	79.65%	13.16%	17.01%	14.00%	14.13%
Unbanked Households	59.78%	84.62%	10.26%	21.30%	19.35%	18.29%
Banked Households	25.73%	78.65%	13.74%	16.14%	12.92%	13.29%
Child Food Security						
High Food Security	0.641	0.721	0.590	0.562	0.579	0.570
	(0.480)	(0.448)	(0.492)	(0.497)	(0.494)	(0.496)
Marginal Food Security	0.132	0.115	0.150	0.157	0.170	0.166
	(0.339)	(0.320)	(0.357)	(0.364)	(0.376)	(0.372)
Low Food Security	0.202	0.144	0.224	0.231	0.211	0.225
	(0.402)	(0.351)	(0.418)	(0.422)	(0.408)	(0.418)
Very Low Food Security	0.025	0.020	0.035	0.051	0.039	0.040
	(0.156)	(0.139)	(0.185)	(0.221)	(0.195)	(0.196)
Use of Food Assistance						
SNAP, Last 12 Months	0.319	0.238	0.269	0.347	0.405	0.315
	(0.466)	(0.426)	(0.444)	(0.476)	(0.491)	(0.465)
Emergency Food, Last 12 Months	0.144	0.097	0.154	0.177	0.179	0.157
	(0.352)	(0.296)	(0.362)	(0.382)	(0.384)	(0.364)
WIC, Last 30 Days	0.160	0.139	0.171	0.157	0.191	0.193
	(0.366)	(0.346)	(0.377)	(0.364)	(0.394)	(0.395)
Free/ Reduced Price NSLP, Last 30 Days	0.364	0.313	0.392	0.409	0.491	0.485
	(0.481)	(0.464)	(0.489)	(0.492)	(0.500)	(0.500)
Free/ Reduced Price NSBP, Last 30 Days	0.287	0.249	0.296	0.327	0.410	0.375
	(0.453)	(0.433)	(0.457)	(0.469)	(0.492)	(0.485)
Observations	1,087	2,852	451	647	517	483

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Sample includes only households that ever used any of these AFS products. Households could use more than one product so observations will not sum up to the sample size.

Table 11. Child Food Security and Food Assistance, by Frequency of Use for Non-Bank Check Cashers and Non-Bank Money Order

	Non-Bank Check Casher			Non-Bank Money Order		
	At Least a Few Times a Year	Once or Twice a Year	Almost Never	At Least a Few Times a Year	Once or Twice a Year	Almost Never
	(1)	(2)	(3)	(4)	(5)	(6)
Portion of Households	53.99%	20.14%	25.87%	43.35%	23.86%	32.78%
Child Food Security						
High Food Security	0.616	0.581	0.742	0.629	0.727	0.838
	(0.487)	(0.495)	(0.438)	(0.483)	(0.446)	(0.369)
Marginal Food Security	0.141	0.171	0.088	0.140	0.122	0.076
	(0.349)	(0.378)	(0.284)	(0.348)	(0.328)	(0.266)
Low Food Security	0.209	0.220	0.165	0.200	0.134	0.077
	(0.407)	(0.415)	(0.372)	(0.400)	(0.341)	(0.267)
Very Low Food Security	0.034	0.028	0.004	0.030	0.016	0.008
	(0.182)	(0.166)	(0.066)	(0.172)	(0.126)	(0.090)
Use of Food Assistance						
SNAP, Last 12 Months	0.384	0.292	0.208	0.368	0.196	0.095
	(0.487)	(0.456)	(0.406)	(0.483)	(0.397)	(0.294)
Emergency Food, Last 12 Months	0.172	0.140	0.085	0.144	0.090	0.039
	(0.378)	(0.347)	(0.280)	(0.351)	(0.286)	(0.194)
WIC, Last 30 Days	0.177	0.167	0.116	0.211	0.119	0.061
	(0.382)	(0.373)	(0.320)	(0.408)	(0.324)	(0.239)
Free/ Reduced Price NSLP, Last 30 Days	0.430	0.349	0.253	0.458	0.310	0.127
	(0.496)	(0.478)	(0.435)	(0.498)	(0.463)	(0.333)
Free/ Reduced Price NSBP, Last 30 Days	0.355	0.233	0.199	0.364	0.246	0.102
	(0.479)	(0.424)	(0.400)	(0.481)	(0.431)	(0.303)
Observations	536	218	321	1,135	662	1,048

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard errors provided in parentheses. Sample includes only households that ever used either a non-bank check casher or non-bank money order. Households could use more than one product so observations will not sum up to the sample size.

Table 12. Impact of Non-Bank Check Cashers and Non-Bank Money Orders on Child Food Security

	Very Low Food Security					Food Insecurity				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8	(9)	(10)
Every Used Check Casher or Money Order	0.002	-	-	-	-	0.036***	-	-	-	-
	(0.003)					(0.007)				
Ever Used Check Casher	-	0.003	-	-	-	-	0.068***	-	-	-
		(0.006)					(0.015)			
Ever Used Money Order	-	-	0.003	-	-	-	-	0.035***	-	-
			(0.003)					(0.009)		
Use Check Casher at Least a Few Times a Year	-	-	-	0.007	-	-	-	-	0.071***	-
				(0.008)					(0.018)	
Use Money Order at Least a Few Times a Year	-	-	-	-	0.003	-	-	-	-	0.043***
					(0.005)					(0.012)
Observations	9,237	9,011	8,992	9,011	8,992	9,237	9,011	8,992	9,011	8,992
R-squared	0.039	0.041	0.041	0.041	0.041	0.142	0.146	0.143	0.145	0.143

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 13. Impact of Non-Bank Check Cashers and Non-Bank Money Orders on Child Food Security, by Banked Status

	Very Low Food Security		Food Insecurity		Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Unbanked	Banked	Unbanked	Banked	Unbanked	Banked	Unbanked	Banked
Ever Use a Non-Bank Check Casher	-0.017	0.006	0.024	0.070***				
	(0.019)	(0.006)	(0.040)	(0.016)				
Ever Use a Non-Bank Money Order					-0.005	0.003	0.030	0.033***
					(0.019)	(0.003)	(0.042)	(0.008)
Observations	700	8,311	700	8,311	699	8,293	699	8,293
R-squared	0.102	0.038	0.131	0.136	0.101	0.038	0.129	0.133

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 14. Main Reason used a Check Casher or Money Order Rather than a Bank

	Non-Bank Check Casher			Non-Bank Money Order		
	Economic	Customer Service	Other	Economic	Customer Service	Other
	(1)	(2)	(3)	(4)	(5)	(6)
Portion of Users	44.07%	45.93%	10.00%	23.17%	66.56%	10.27%
Child Food Security						
High Food Security	0.574	0.708	0.616	0.674	0.742	0.680
	(0.495)	(0.455)	(0.489)	(0.469)	(0.438)	(0.467)
Marginal Food Security	0.138	0.112	0.214	0.110	0.114	0.140
	(0.345)	(0.316)	(0.412)	(0.313)	(0.318)	(0.348)
Low Food Security	0.252	0.164	0.148	0.183	0.129	0.158
	(0.435)	(0.371)	(0.357)	(0.387)	(0.335)	(0.365)
Very Low Food Security	0.036	0.015	0.023	0.034	0.015	0.022
	(0.187)	(0.122)	(0.149)	(0.180)	(0.120)	(0.148)
Use of Food Assistance						
SNAP, Last 12 Months	0.385	0.280	0.238	0.296	0.217	0.256
	(0.487)	(0.449)	(0.428)	(0.457)	(0.412)	(0.437)
Emergency Food, Last 12 Months	0.157	0.140	0.097	0.135	0.081	0.116
	(0.364)	(0.347)	(0.297)	(0.342)	(0.273)	(0.321)
WIC, Last 30 Days	0.171	0.149	0.136	0.146	0.138	0.131
	(0.377)	(0.356)	(0.344)	(0.353)	(0.345)	(0.338)
Free/ Reduced Price NSLP, Last 30 Days	0.411	0.333	0.312	0.375	0.293	0.313
	(0.493)	(0.472)	(0.465)	(0.484)	(0.456)	(0.464)
Free/ Reduced Price NSBP, Last 30 Days	0.336	0.256	0.221	0.291	0.237	0.246
	(0.473)	(0.437)	(0.417)	(0.455)	(0.425)	(0.431)
Observations	430	534	100	658	1,877	297

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Sample only includes those that ever used either a non-bank check casher or non-bank money order. Households could use more than one product so observations will not sum up to the sample size.

Table 15. Impact of AFS Products Providing Credit on Child Food Security

	Very Low Food Security					Food Insecurity				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ever Use Any AFS Product Providing Credit	0.014***					0.067***				
	(0.004)					(0.009)				
Ever Use a Pawn Loan		0.034***					0.134***			
		(0.010)					(0.020)			
Ever Use a Payday Loan			0.018*					0.119***		
			(0.010)					(0.023)		
Ever Use a Rent-to-Own Agreement				0.018*					0.066***	
				(0.009)					(0.021)	
Ever Use a Refund Anticipation Loan					0.018*					0.103***
					(0.010)					(0.022)
Observations	9,237	9,006	9,004	8,993	8,987	9,237	9,006	9,004	8,993	8,987
R-squared	0.044	0.046	0.042	0.041	0.042	0.153	0.153	0.148	0.142	0.146

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 16. Food Security and Food Assistance, by Frequency of Use of AFS Products, for Pawn Shops and Rent-to-Own Stores

	Pawn Shop			Rent-to-Own		
	At Least a Few Times a Year	Once or Twice a Year	Almost Never	At Least a Few Times a Year	Once or Twice a Year	Almost Never
	(1)	(2)	(3)	(4)	(5)	(6)
Portion of Households	13.48%	26.30%	60.22%	13.97%	38.46%	47.57%
Child Food Security						
High Food Security	0.354	0.532	0.619	0.558	0.545	0.612
	(0.481)	(0.501)	(0.486)	(0.500)	(0.499)	(0.488)
Marginal Food Security	0.140	0.168	0.156	0.176	0.226	0.123
	(0.349)	(0.375)	(0.364)	(0.383)	(0.419)	(0.330)
Low Food Security	0.362	0.253	0.192	0.174	0.199	0.233
	(0.483)	(0.436)	(0.395)	(0.382)	(0.401)	(0.423)
Very Low Food Security	0.144	0.048	0.032	0.092	0.029	0.032
	(0.353)	(0.213)	(0.177)	(0.292)	(0.168)	(0.177)
Use of Food Assistance						
SNAP, Last 12 Months	0.539	0.445	0.263	0.561	0.399	0.374
	(0.502)	(0.499)	(0.441)	(0.500)	(0.489)	(0.485)
Emergency Food, Last 12 Months	0.325	0.149	0.156	0.259	0.165	0.169
	(0.471)	(0.357)	(0.364)	(0.441)	(0.375)	(0.375)
WIC, Last 30 Days	0.173	0.168	0.149	0.237	0.209	0.165
	(0.381)	(0.375)	(0.357)	(0.428)	(0.407)	(0.372)
Free/ Reduced Price NSLP, Last 30 Days	0.530	0.544	0.322	0.620	0.535	0.418
	(0.502)	(0.500)	(0.468)	(0.489)	(0.500)	(0.494)
Free/ Reduced Price NSBP, Last 30 Days	0.416	0.445	0.252	0.536	0.442	0.348
	(0.496)	(0.498)	(0.435)	(0.502)	(0.498)	(0.477)
Observations	81	163	402	71	191	254

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Sample includes only households that reported ever using a pawn shop or rent-to-own agreement. Households could use more than one product so observations will not sum up to the sample size.

Table 17. Impact of Frequency of Pawn Shop and Rent-to-Own Contracts on Child Food Security

	Very Low Food Security				Food Insecurity			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Used Pawn Shop At Least a Few Times a Year or Once or Twice a Year	0.056***				0.170***			
	(0.021)				(0.034)			
Used Rent-to-Own Contract at Least a Few Times a Year or Once or Twice a Year		0.011				0.097***		
		(0.012)				(0.030)		
Used Pawn Shop At Least a Few Times a Year			0.120***				0.288***	
			(0.044)				(0.059)	
Used Pawn Shop Once or Twice a Year			0.026				0.124***	
			(0.021)				(0.040)	
Use Pawn Shop Almost Never			0.020*				0.106***	
			(0.010)				(0.024)	
Used Rent-to-Own At Least a Few Times a Year				0.063*				0.046
				(0.037)				(0.056)
Used Rent-to-Own Once or Twice a Year				0.007				0.033
				(0.012)				(0.032)
Used Rent-to-Own Almost Never				0.013				0.100***
				(0.012)				(0.030)
Observations	9,006	9,237	9,005	8,992	9,006	9,237	9,005	8,992
R-squared	0.047	0.039	0.053	0.042	0.15	0.139	0.156	0.143

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 18. Child Food Security and Food Assistance, by Main Reason for Using a Pawn Loan

	Economic	Customer Service	Other
	(1)	(2)	(3)
Portion of Households	45.43%	39.10%	15.47%
Child Food Security			
High Food Security	0.490	0.559	0.395
	(0.501)	(0.498)	(0.492)
Marginal Food Security	0.120	0.202	0.238
	(0.326)	(0.403)	(0.429)
Low Food Security	0.309	0.220	0.246
	(0.463)	(0.415)	(0.434)
Very Low Food Security	0.081	0.019	0.120
	(0.273)	(0.138)	(0.327)
Use of Food Assistance			
SNAP Receipt, Last 12 Months	0.420	0.377	0.359
	(0.495)	(0.486)	(0.483)
Emergency Food Receipt, Last 12 Months	0.188	0.193	0.264
	(0.391)	(0.395)	(0.444)
WIC Receipt, Last 30 Days	0.172	0.151	0.212
	(0.378)	(0.359)	(0.412)
Free/ Reduced Price NSLP, Last 30 Days	0.506	0.386	0.446
	(0.501)	(0.488)	(0.501)
Free/ Reduced Price NSBP, Last 30 Days	0.406	0.297	0.411
	(0.492)	(0.458)	(0.495)
Observations	225	185	72

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Sample includes households that ever used a pawn shop. Households could use more than one product so observations will not sum up to the sample size.

Table 19. Food Security and Food Assistance Use, by Frequency of Payday Lending Use Over the Past 12 Months for Users of Payday Loans

	Zero	Once	Twice	3-5 Times	6-10 times	11- 15 Times	16 – 20 Times
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Percent of Payday Users	10.00%	34.57%	18.04%	18.91%	10.00%	4.35%	4.13%
Child Food Security							
High Food Security	0.732	0.629	0.624	0.493	0.614	0.460	0.398
	(0.448)	(0.485)	(0.487)	(0.503)	(0.492)	(0.511)	(0.504)
Marginal Food Security	0.191	0.139	0.106	0.179	0.129	0.140	0.232
	(0.398)	(0.347)	(0.310)	(0.386)	(0.339)	(0.356)	(0.434)
Low Food Security	0.077	0.212	0.246	0.258	0.209	0.360	0.287
	(0.270)	(0.410)	(0.433)	(0.440)	(0.411)	(0.493)	(0.465)
Very Low Food Security	-	0.021	0.024	0.069	0.048	0.040	0.083
		(0.142)	(0.153)	(0.255)	(0.216)	(0.202)	(0.284)
Use of Food Assistance							
SNAP Receipt, Last 12 Months	0.255	0.274	0.231	0.286	0.321	0.257	0.217
	(0.441)	(0.447)	(0.424)	(0.455)	(0.472)	(0.448)	(0.424)
Emergency Food Receipt, Last 12 Months	0.125	0.177	0.131	0.139	0.171	0.229	0.081
	(0.335)	(0.383)	(0.339)	(0.348)	(0.381)	(0.431)	(0.2813)
WIC Receipt, Last 30 Days	0.108	0.164	0.175	0.124	0.244	0.313	0.273
	(0.314)	(0.372)	(0.382)	(0.331)	(0.435)	(0.476)	(0.459)
Free/ Reduced Price NSLP, Last 30 Days	0.351	0.328	0.466	0.390	0.340	0.555	0.677
	(0.483)	(0.471)	(0.502)	(0.491)	(0.479)	(0.510)	(0.481)
Free/ Reduced Price NSBP, Last 30 Days	0.244	0.234	0.384	0.277	0.281	0.451	0.536
	(0.435)	(0.425)	(0.489)	(0.450)	(0.454)	(0.511)	(0.513)
Observations	46	156	81	86	45	20	18

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Sample includes only those households that reported ever using a payday loan.

Table 20. Impact of Frequency of Payday Loan Use Over the Past 12 Months on Child Food Security

	Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)
Number of Payday Loans During Last 12 Months	0.004**		0.017***	
	(0.002)		(0.004)	
1 Payday Loan During Last 12 Months		-0.001		0.078***
		(0.012)		(0.029)
2 Payday Loans During Last 12 Months		0.011		0.141**
		(0.021)		(0.054)
3 – 5 Payday Loans During Last 12 Months		0.050*		0.188***
		(0.027)		(0.047)
6 – 10 Payday Loans During Last 12 Months		0.031		0.123*
		(0.028)		(0.063)
11 – 15 Payday Loans During Last 12 Months		0.027		0.246**
		(0.040)		(0.118)
16 – 20 Payday Loans During Last 12 Months		0.062		0.226
		(0.045)		(0.140)
Observations	8,911	9,004	8,911	9,004
R-squared	0.043	0.044	0.146	0.151

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 21. Child Food Security Status and Food Assistance, by Main Reason used a Payday Lender

	Economic	Customer Service	Other
	(1)	(2)	(3)
Portion of Households	66.18%	24.14%	9.68%
Child Food Security			
High Food Security	0.552	0.653	0.596
	(0.498)	(0.478)	(0.496)
Marginal Food Security	0.140	0.180	0.177
	(0.348)	(0.386)	(0.386)
Low Food Security	0.268	0.126	0.227
	(0.444)	(0.334)	(0.423)
Very Low Food Security	0.040	0.042	-
	(0.195)	(0.201)	
Use of Food Assistance			
SNAP Receipt, Last 12 Months	0.276	0.238	0.298
	(0.448)	(0.428)	(0.463)
Emergency Food Receipt, Last 12 Months	0.164	0.131	0.148
	(0.371)	(0.339)	(0.359)
WIC Receipt, Last 30 Days	0.174	0.142	0.236
	(0.380)	(0.351)	(0.429)
Free/ Reduced Price NSLP, Last 30 Days	0.388	0.381	0.399
	(0.488)	(0.488)	(0.495)
Free/ Reduced Price NSBP, Last 30 Days	0.300	0.295	0.225
	(0.459)	(0.458)	(0.422)
Observations	283	110	45

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Sample includes households that ever used a payday lender.

Table 22. Child Food Security and Food Assistance, by Main Purpose of Use of Payday Loan, RAL, Rent-to-Own Agreement, or Pawn Shop Use during the Past 12 Months

	Lost Income	Basic Living Expenses	House Repairs or Appliance	Medical Expenses	Car Repairs	School or Childcare	Special Gifts or Luxuries	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Portion of Households	15.54%	39.15%	8.66%	2.23%	3.52%	1.31%	6.51%	23.08%
Child Food Security								
High Food Security	0.573	0.513	0.627	0.572	0.653	0.554	0.711	0.720
	(0.496)	(0.500)	(0.486)	(0.504)	(0.481)	(0.509)	(0.455)	(0.450)
Marginal Food Security	0.227	0.151	0.179	0.069	0.069	0.202	0.192	0.127
	(0.420)	(0.358)	(0.385)	(0.258)	(0.255)	(0.412)	(0.396)	(0.334)
Low Food Security	0.156	0.295	0.183	0.268	0.234	0.136	0.097	0.122
	(0.364)	(0.456)	(0.388)	(0.451)	(0.428)	(0.352)	(0.297)	(0.327)
Very Low Food Security	0.043	0.041	0.011	0.091	0.044	0.107	-	0.031
	(0.204)	(0.200)	(0.106)	(0.293)	(0.208)	(0.317)		(0.174)
Use of Food Assistance								
SNAP, Last 12 Months	0.319	0.375	0.350	0.363	0.155	0.212	0.250	0.213
	(0.467)	(0.485)	(0.479)	(0.490)	(0.366)	(0.418)	(0.435)	(0.410)
Emergency Food, Last 12 Months	0.147	0.178	0.153	0.166	0.136	0.064	0.092	0.101
	(0.355)	(0.383)	(0.361)	(0.379)	(0.346)	(0.250)	(0.291)	(0.302)
WIC Receipt, Last 30 Days	0.168	0.184	0.189	0.108	0.171	0.025	0.241	0.119
	(0.375)	(0.388)	(0.393)	(0.316)	(0.381)	(0.161)	(0.430)	(0.324)
Free/ Reduced Price NSLP, Last 30 Days	0.452	0.467	0.493	0.523	0.401	0.316	0.372	0.288
	(0.499)	(0.499)	(0.502)	(0.509)	(0.496)	(0.476)	(0.485)	(0.454)
Free/ Reduced Price NSBP, Last 30 Days	0.320	0.378	0.403	0.447	0.311	0.316	0.260	0.225
	(0.468)	(0.486)	(0.492)	(0.507)	(0.468)	(0.476)	(0.441)	(0.418)
Observations	210	532	134	28	50	24	106	361

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses. Sample includes only those households that reported using one of these products.

Table 23. Impact of Non-Bank Check Cashing and State Regulations on Child Food Security

	Very Low Food Security	Food Insecurity
	(1)	(2)
Ever Used Non-Bank Check Casher in a State that Regulates Fees	0.006	0.072***
	(0.005)	(0.018)
Ever Used Non-Bank Check Casher in a State that Doesn't Regulate Fees	-0.012	-0.014
	(0.009)	(0.025)
Observations	9,011	9,011
R-squared	0.041	0.146

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 24. 2SLS Estimates for Effect of Pawn Shop Use on Child Food Security

Panel A. First Stage Estimates: Effect of State Laws on Ever Using a Pawn Shop

	(1)	(2)	(3)
Pawn Cost Under $10	-0.035***	-	-0.017**
	(0.009)		(0.007)
Pawn Return	-	-0.046***	-0.034***
		(0.008)	(0.009)
F-Statistic	15.14	33.28	22.99

Panel B. Reduced Form Estimates

	Very Low Food Security			Food Insecurity		
	(1)	(2)	(3)	(4)	(5)	(6)
Pawn Cost Under $10	-0.002*		-0.003	-0.014**		-0.011
	(0.001)		(0.002)	(0.005)		(0.007)
Pawn Return		-0.002	0.0002		-0.013**	-0.005
		(0.001)	(0.002)		(0.006)	(0.008)

Panel C. IV Estimates

	Very Low Food Security	Food Insecurity
Instrument on Pawn Shop Use:	(1)	(2)
Pawn Cost Under $10	0.094*	0.381***
	(0.055)	(0.137)
Pawn Return	0.051	0.269**
	(0.042)	(0.122)
Both	0.066	0.307***
	(0.043)	(0.112)
Observations	9,006	9,006

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 25. Impact of Use of Rent-to-Own Contracts on Food Security of Children, by State Disclosure Requirements

	Very Low Food Security		Food Insecurity	
	No Disclosure Requirements	Disclosure Requirements	No Disclosure Requirements	Disclosure Requirements
	(1)	(2)	(3)	(4)
Rent-to-Own Contract	0.018	0.017*	0.258**	0.059**
	(0.049)	(0.010)	(0.050)	(0.022)
Observations	612	8,381	612	8,381

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 26. 2SLS Estimates for Effect of Payday Loan Use on Food Security of Children

Panel A. First Stage Estimates

	(1)
State Payday Lending Ban	-0.042***
	(0.006)
F Statistic	62.25

Panel B. Reduced Form Estimates

	Very Low Food Security	Food Insecurity
	(1)	(2)
State Payday Lending Bans	-0.0001	0.002
	(0.001)	(0.009)

Panel C. IV Estimates

	Very Low Food Security	Food Insecurity
	(1)	(2)
Payday Loan in Last Year	0.028	-0.031
	(0.034)	(0.189)
Observations	9,018	9,018

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1

Table 27. Food Security and Food Assistance Use, by Extent of Financial Resource Sharing for Two Adult Households, Weighted

Adults Have:	Overall	Shared Finances	Some Shared & Some Separate	Separate Finances	I am only adult (volunteer)
	(1)	(2)	(3)	(4)	(5)
Overall	-	68.01%	17.89%	9.72%	4.38%
Child Food Security Status During 2008					
High Food Security	0.835	0.850	0.865	0.755	0.653
	(0.371)	(0.357)	(0.342)	(0.431)	(0.477)
Marginal Food Security	0.074	0.071	0.063	0.100	0.101
	(0.262)	(0.257)	(0.243)	(0.301)	(0.313)
Low Food Security	0.078	0.071	0.059	0.112	0.204
	(0.269)	(0.256)	(0.236)	(0.315)	(0.404)
Very Low Food Security	0.013	0.008	0.013	0.033	0.034
	(0.111)	(0.090)	(0.111)	(0.179)	(0.180)
Use of Food Assistance					
SNAP, Last 12 Months	0.108	0.088	0.085	0.216	0.279
	(0.311)	(0.238)	(0.279)	(0.412)	(0.449)
Emergency Food, Last 12 Months	0.046	0.041	0.040	0.080	0.078
	(0.210)	(0.199)	(0.196)	(0.271)	(0.268)
WIC, Last 30 Days	0.078	0.070	0.074	0.142	0.078
	(0.268)	(0.255)	(0.262)	(0.349)	(0.269)
Free or Reduced Price NSLP, Last 30 Days	0.179	0.154	0.139	0.324	0.399
	(0.383)	(0.361)	(0.346)	(0.468)	(0.490)
Free or Reduced Price NSBP, Last 30 Days	0.134	0.115	0.098	0.255	0.313
	(0.340)	(0.319)	(0.297)	(0.436)	(0.464)
Observations	8,148	5,567	1,476	754	344

Notes: Author's calculations using households with children and more than one adult in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses.

Table 28. Impact of Financial Resource Sharing on Food Security Outcomes for Households with More than One Adult

	Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)
Complete Share	-0.008**		-0.007	
	(0.004)		(0.008)	
Some Share		-0.013*		-0.022
		(0.0078)		(0.016)
Married Couple	-0.010	-0.011*	-0.048***	-0.052***
	(0.006)	(0.006)	(0.016)	(0.017)
Single Parent	0.013*	0.012	0.039***	0.035**
	(0.008)	(0.008)	(0.015)	(0.015)
African-American, Non-Hispanic	0.016*	0.016**	0.029*	0.029*
	(0.008)	(0.008)	(0.016)	(0.015)
Hispanic	0.0003	0.00004	0.015	0.015
	(0.006)	(0.006)	(0.014)	(0.014)
Native-born Citizen	-0.011*	-0.011*	-0.018	-0.018
	(0.006)	(0.006)	(0.012)	(0.012)
Oldest Child Aged 6 – 14	0.006*	0.006*	0.032***	0.032***
	(0.003)	(0.003)	(0.008)	(0.008)
Oldest Child Aged 15 – 17	0.018***	0.018***	0.048***	0.049***
	(0.005)	(0.004)	(0.011)	(0.011)
Primary Earner Age 30 – 39	0.001	0.0003	-0.008	-0.009
	(0.006)	(0.006)	(0.014)	(0.014)
Primary Earner Age 40 – 40	-0.004	-0.004	-0.024	-0.024*
	(0.006)	(0.006)	(0.014)	(0.014)
Primary Earner Age 50 - 59	-0.005	-0.005	-0.022	-0.023
	(0.007)	(0.008)	(0.017)	(0.017)
Primary Earner Age 60 +	-0.008	-0.008	-0.043	-0.043
	(0.009)	(0.008)	(0.027)	(0.027)
High School Graduate	0.028***	0.028***	0.042	0.042
	(0.009)	(0.009)	(0.026)	(0.026)
Some College	0.028***	0.028***	0.032	0.031
	(0.008)	(0.008)	(0.026)	(0.026)
College Graduate	0.023***	0.023***	0.014	0.015
	(0.008)	(0.008)	(0.026)	(0.026)
More than College	0.022***	0.023***	-0.003	-0.003
	(0.008)	(0.008)	(0.025)	(0.025)

Table 28 (cont'd)	Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)
Employed Part-Time	-0.004	-0.005	0.010	0.010
	(0.009)	(0.009)	(0.023)	(0.023)
Unemployed	0.014	0.014	0.045	0.046
	(0.017)	(0.017)	(0.033)	(0.033)
Not Employed, Disabled	0.053	0.053	0.224***	0.225***
	(0.035)	(0.035)	(0.057)	(0.057)
Not Employed, Retired or Out of Labor Force	0.008	0.008	0.004	0.004
	(0.014)	(0.014)	(0.033)	(0.033)
Military	-0.008***	-0.007***	-0.049***	-0.048***
	(0.003)	(0.003)	(0.016)	(0.016)
Household Income 100% - 130% of Poverty	-0.019	-0.019	-0.059**	-0.059**
	(0.013)	(0.013)	(0.026)	(0.026)
Household Income 130% - 185% of Poverty	-0.026**	-0.0253**	-0.114***	-0.113***
	(0.012)	(0.012)	(0.024)	(0.024)
Household Income Above 185% of Poverty	-0.038***	-0.037***	-0.192***	-0.192***
	(0.010)	(0.010)	(0.020)	(0.020)
Missing Income	-0.043***	-0.043***	-0.192***	-0.191***
	(0.009)	(0.009)	(0.021)	(0.021)
State Unemployment Rate in 2008	0.0007	0.0007	-0.002	-0.002
	(0.001)	(0.001)	(0.003)	(0.003)
Constant	0.020	0.026	0.222***	0.237***
	(0.015)	(0.017)	(0.034)	(0.037)
Observations	7,793	7,793	7,793	7,793
R-squared	0.041	0.042	0.119	0.119

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). Sample includes households with more than one adult. All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA.. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table 29. Extent of Household Financial Sharing, by Gender of Respondent

	Overall		Shared Finances		Some Shared & Some Separate		Separate Finances	
	Male	Female	Male	Female	Male	Female	Male	Female
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Overall	26.78%	51.27	27.65%	48.93%	28.67%	50.48%	21.33%	57.94%
Children's Food Security Status During 2008								
High Food Security	0.880	0.799	0.881	0.825	0.905	0.835	0.865	0.692
	(0.325)	(0.400)	(0.324)	(0.380)	(0.294)	(0.371)	(0.342)	(0.462)
Marginal Food Security	0.061	0.089	0.065	0.084	0.034	0.077	0.079	0.122
	(0.239)	(0.284)	(0.246)	(0.277)	(0.182)	(0.267)	(0.270)	(0.328)
Low Food Security	0.052	0.098	0.052	0.083	0.051	0.073	0.041	0.152
	(0.222)	(0.297)	(0.221)	(0.276)	(0.219)	(0.261)	(0.199)	(0.359)
Very Low Food Security	0.007	0.014	0.003	0.009	0.011	0.014	0.015	0.034
	(0.082)	(0.117)	(0.056)	(0.093)	(0.102)	(0.118)	(0.123)	(0.182)
Use of Food Assistance								
SNAP, Last 12 Months	0.064	0.132	0.068	0.101	0.035	0.108	0.097	0.238
	(0.245)	(0.338)	(0.251)	(0.301)	(0.184)	(0.311)	(0.297)	(0.426)
Emergency Food, Last 12 Months	0.034	0.056	0.033	0.048	0.024	0.050	0.066	0.097
	(0.180)	(0.230)	(0.180)	(0.215)	(0.152)	(0.219)	(0.250)	(0.296)
WIC, Last 30 Days	0.057	0.086	0.057	0.079	0.043	0.082	0.092	0.140
	(0.232)	(0.280)	(0.233)	(0.270)	(0.203)	(0.274)	(0.290)	(0.347)
Received Free or Reduced Price NSLP, Last 30 Days	0.123	0.215	0.124	0.175	0.076	0.184	0.197	0.373
	(0.328)	(0.411)	(0.330)	(0.380)	(0.265)	(0.388)	(0.399)	(0.484)
Received Free or Reduced Price NSBP, Last 30 Days	0.082	0.162	0.084	0.130	0.039	0.130	0.151	0.291
	(0.275)	(0.368)	(0.278)	(0.336)	(0.195)	(0.337)	(0.359)	(0.455)
Observations	2,123	4,197	1,498	2,758	401	750	158	442

Notes: Author's calculations using households with children and more than one adult in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses.

Table 30. Impact of Financial Resource Sharing on Food Security of Children, by Gender of Respondent

	Very Low Food Security		Food Insecurity	
	Female Respondent	Male Respondent	Female Respondent	Male Respondent
	(1)	(2)	(3)	(4)
At Least Some Sharing of Financial Resources	-0.013	-0.008	-0.049**	0.026
	(0.010)	(0.012)	(0.023)	(0.023)
Observations	3,947	2,057	3,947	2,057
R-squared	0.052	0.044	0.129	0.13

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). Sample includes households with more than one adult. All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table 31. Child Food Security and Use of Food Assistance, by Respondent's Participation in Financial Decisions of Household

	Overall	A Lot	Some	Not at All
	(1)	(2)	(3)	(4)
Overall Sample	-	82.37%	15.99%	1.65%
Child Food Security Status During 2008				
High Food Security	0.853	0.862	0.808	0.834
	(0.354)	(0.345)	(0.394)	(0.373)
Marginal Food Security	0.070	0.069	0.072	0.065
	(0.255)	(0.254)	(0.259)	(0.248)
Low Food Security	0.068	0.061	0.104	0.062
	(0.252)	(0.240)	(0.306)	(0.242)
Very Low Food Security	0.009	0.007	0.016	0.039
	(0.095)	(0.085)	(0.124)	(0.194)
Use of Food Assistance				
SNAP, Last 12 Months	0.087	0.080	0.116	0.162
	(0.283)	(0.272)	(0.320)	(0.370)
Emergency Food, Last 12 Months	0.041	0.040	0.047	0.052
	(0.199)	(0.195)	(0.213)	(0.248)
WIC, Last 30 Days	0.070	0.065	0.093	0.135
	(0.256)	(0.246)	(0.291)	(0.343)
Received Free or Reduced Price NSLP, Last 30 Days	0.151	0.144	0.183	0.241
	(0.358)	(0.351)	(0.387)	(0.430)
Received Free or Reduced Price NSBP, Last 30 Days	0.111	0.106	0.135	0.170
	(0.315)	(0.307)	(0.342)	(0.378)
Observations	7,064	5,855	1,081	118

Notes: Author's calculations using households with children and more than one adult in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses.

Table 32. Impact of Amount of Participation n Financial Decisions on Food Security Status of Children

	Very Low Food Security Among Children		Food Insecurity Among Children	
	(1)	(2)	(3)	(4)
A Lot of Participation	-0.007		-0.026**	
	(0.005)		(0.011)	
Some or A Lot of Participation		-0.022		0.014
		(0.023)		(0.034)
Married Couple	-0.016***	-0.016***	-0.037*	-0.035*
	(0.003)	(0.003)	(0.020)	(0.020)
Single Parent	0.009	0.009	0.024	0.023
	(0.009)	(0.008)	(0.017)	(0.017)
African-American, Non-Hispanic	0.011	0.010	0.031*	0.031*
	(0.008)	(0.008)	(0.017)	(0.017)
Hispanic	0.002	0.0022	0.014	0.015
	(0.006)	(0.006)	(0.014)	(0.014)
Native-born Citizen	-0.010	-0.010*	-0.010	-0.012
	(0.006)	(0.006)	(0.012)	(0.012)
Oldest Child Aged 6 - 14	0.004	0.004	0.030***	0.030***
	(0.003)	(0.003)	(0.008)	(0.008)
Oldest Child Aged 15 - 17	0.016***	0.016***	0.045***	0.046***
	(0.004)	(0.004)	(0.011)	(0.011)
Primary Earner Age 30 – 39	-0.002	-0.002	-0.015	-0.015
	(0.006)	(0.006)	(0.014)	(0.014)
Primary Earner Age 40 - 49	-0.005	-0.005	-0.026*	-0.026*
	(0.006)	(0.006)	(0.015)	(0.015)
Primary Earner Age 50 - 59	-0.001	-0.001	-0.017	-0.017
	(0.008)	(0.008)	(0.018)	(0.018)
Primary Earner Age 60+	-0.011	-0.011*	-0.041	-0.041
	(0.007)	(0.007)	(0.030)	(0.030)
High School Graduate	0.025***	0.025***	0.013	0.013
	(0.008)	(0.008)	(0.028)	(0.028)
Some College	0.023***	0.023***	0.005	0.004
	(0.007)	(0.008)	(0.028)	(0.028)
College Graduate	0.019**	0.019**	-0.009	-0.010
	(0.008)	(0.008)	(0.029)	(0.028)
More than College	0.019***	0.019**	-0.025	-0.027
	(0.007)	(0.007)	(0.028)	(0.028)

Table 32 (cont'd)	Very Low Food Security		Food Insecurity	
	(1)	(2)	(3)	(4)
Employed Part-Time	-0.003	-0.003	0.018	0.017
	(0.009)	(0.009)	(0.024)	(0.024)
Unemployed	0.009	0.009	0.027	0.027
	(0.016)	(0.016)	(0.034)	(0.034)
Not Employed, Disabled	0.048	0.049	0.216***	0.215***
	(0.033)	(0.033)	(0.062)	(0.061)
Not Employed, Retired or Out of Labor Force	-0.006	-0.006	0.0002	-0.002
	(0.009)	(0.009)	(0.036)	(0.037)
Military	-0.007***	-0.008***	-0.045***	-0.045***
	(0.002)	(0.003)	(0.016)	(0.016)
Household Income 100% - 135% of Poverty	-0.013	-0.013	-0.053*	-0.052*
	(0.012)	(0.012)	(0.029)	(0.029)
Household Income 130% - 185% of Poverty	-0.012	-0.013	-0.102***	-0.102***
	(0.012)	(0.012)	(0.027)	(0.027)
Household Income Above 185% of Poverty	-0.028***	-0.028***	-0.188***	-0.189***
	(0.010)	(0.010)	(0.022)	(0.022)
Missing Household Income	-0.032***	-0.032***	-0.189***	-0.189***
	(0.009)	(0.009)	(0.023)	(0.023)
State Unemployment Rate in 2008	0.001	0.001	-0.003	-0.003
	(0.001)	(0.001)	(0.003)	(0.003)
Constant	0.015	0.031	0.259***	0.227***
	(0.012)	(0.026)	(0.037)	(0.048)
Observations	7,054	7,054	7,054	7,054
R-squared	0.034	0.034	0.117	0.115

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). Sample includes households with more than one adult. All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1.

Table 33. Child Food Security Status and Use of Food Assistance, by Participation in Financial Decisions of Household and Gender of Respondent

	Overall		A Lot		Some		Not at All	
	Male	Female	Male	Female	Male	Female	Male	Female
Overall Sample	27.83%	49.2%	28.03%	50.03%	27.80%	45.42%	18.41%	46.82%
Children's Food Security Status during 2008								
High Food Security	0.886	0.827	0.897	0.833	0.828	0.791	0.850	0.844
	(0.318)	(0.378)	(0.303)	(0.373)	(0.378)	(0.407)	(0.365)	(0.367)
Marginal Food Security	0.058	0.082	0.056	0.085	0.074	0.064	-	0.090
	(0.234)	(0.275)	(0.229)	(0.279)	(0.262)	(0.245)		(0.290)
Low Food Security	0.051	0.081	0.041	0.073	0.098	0.126	0.150	0.043
	(0.221)	(0.273)	(0.199)	(0.261)	(0.298)	(0.333)	(0.365)	(0.204)
Very Low Food Security	0.005	0.001	0.006	0.008	-	0.019	-	0.023
	(0.068)	(0.099)	(0.075)	(0.089)		(0.137)		(0.152)
Use of Food Assistance								
SNAP, Last 12 Months	0.061	0.102	0.053	0.099	0.104	0.114	0.051	0.135
	(0.239)	(0.303)	(0.223)	(0.299)	(0.305)	(0.318)	(0.229)	(0.345)
Emergency Food, Last 12 Months	0.031	0.049	0.030	0.047	0.041	0.052	-	0.102
	(0.174)	(0.215)	(0.170)	(0.212)	(0.198)	(0.222)		(0.306)
WIC, Last 30 Days	0.054	0.079	0.050	0.076	0.073	0.097	0.117	0.099
	(0.227)	(0.270)	(0.218)	(0.265)	(0.260)	(0.297)	(0.296)	(0.302)
Free/Reduced Price NSLP, Last 30 Days	0.114	0.176	0.110	0.171	0.136	0.204	0.060	0.201
	(0.318)	(0.381)	(0.313)	(0.377)	(0.343)	(0.403)	(0.243)	(0.405)
Free/Reduced Price NSBP, Last 30 Days	0.075	0.130	0.072	0.126	0.088	0.152	0.060	0.138
	(0.263)	(0.336)	(0.259)	(0.332)	(0.283)	(0.359)	(0.243)	(0.348)
Observations	1,902	3,509	1,584	2,971	296	489	22	49

Notes: Author's calculations using households with children and more than one adult in both the December 2008 and January 2009 Current Population Survey (CPS). All sample statistics weighted by the Food Security Supplement (FSS) weight. Standard deviations provided in parentheses.

Table 34. Impact of Amount of Participation in Financial Decisions and Food Security Status of Children, by Gender

	Very Low Food Security		Food Insecurity	
	Female	Male	Female	Male
	(1)	(2)	(3)	(4)
A Lot of Financial Participation	-0.010	0.009**	-0.040**	-0.034*
	(0.007)	(0.004)	(0.017)	(0.020)
Observations	3,515	1,900	3,515	1,900
R-squared	0.046	0.042	0.122	0.145

Notes: Author's calculations using households with children in both the December 2008 and January 2009 Current Population Survey (CPS). Sample includes households with more than one adult. All estimates weighted by the Food Security Supplement (FSS) weight. Robust standard errors provided in parentheses. Covariates include household income relative to poverty, age of the primary earner, age of the oldest child, race/ethnic status, nativity, household composition, educational attainment, employment, state unemployment rate, and the supply of banks in the CBSA. See text for further detail. Statistical significance is denoted as follows: *** p<0.01, ** p<0.05, * p<0.1.