HIGH PRICE, HIGH IMPORTANCE: EXAMINING DEMAND FOR HIGH-PRICED CREDIT

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DISSERTATION

Presented to the Faculty of

The University of Texas at Dallas

in Partial Fulfillment

of the Requirements

for the Degree of

DOCTOR OF PHILOSOPHY IN

PUBLIC POLICY AND POLITICAL ECONOMY

THE UNIVERSITY OF TEXAS AT DALLAS

May 2019

ACKNOWLEDGMENTS

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The University of Texas at Dallas, 2019

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For 4,000 years those in position to influence policy have attempted to protect consumers from loans with terms they consider harmful. This continues today with attempts to address loans from payday lenders, pawnshops, etc. Despite this long history of restrictions and bans, demand for high-priced credit remains. The question of what drives demand for high-priced credit has gone largely unexplored and remains unanswered. In this research, I focus on the demand side of high-priced credit through interviews and a discrete choice experiment. The results of my research revealed that borrowers consider a range of non-monetary factors in the loan choices and order their preferences depending on the circumstances driving their need for credit. Ultimately, I find borrowers choose loans that best fit their needs given their situation.

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CHAPTER 1

INTRODUCTION

As with any product or service, loans are transactions. Loans, like other types of transactions, involve both supply and demand. The supply of side of credit transactions has been robustly covered in the field of consumer credit research. Less studied is the demand side for which little empirical research exists. This imbalance in the research has left us with an incomplete understanding of why people use credit that to outsiders may seem excessively expensive.

With this study, I contribute to the field of consumer credit research by adding to the research on the demand side of credit transactions. In this research, I conduct an empirical investigation into the factors that are important to borrowers and how they use these factors in choosing a loan. The results of this investigation hopefully provide guidance for creating a more complete understanding of consumer credit that will yield more effective policy.

Historically consumer finance policy has focused on protecting borrowers from unfair practices. The idea behind these efforts is that certain classes of borrowers suffer at the hands of lenders who take advantage of borrowers' financial situation. While this belief may or may not be accurate, the resulting policy efforts have long suffered from weak empirical foundations. This weakness is a too limited understanding of consumer decision making concerning credit use. This limitation stems from an overemphasis on the characteristics of supply to the exclusion of other factors, which may be as or more important. Examples of these factors may include approval requirement, processing time, accessibility, etc.

The purpose of the research described herein is to improve understanding of the larger set of factors that consumers may use to decide whether to choose a type of loan. I also seek to provide insight into how borrowers rank these factors in their decision-making process. On the basis of this improved understanding, this project yields recommendations for policy changes that improve access to credit for consumers.

Foundations of Consumer Finance Policy

Origins of credit transactions are uncertain. Surer is that from earliest days of civilization elites have often believed that the terms of these transactions have engendered sufficient discontent – usually on the borrower side - to invite notice and policy intervention by authorities. The principal focus of credit policy interventions has always turned on price. Around 1800 BC, for example, King Hammurabi of Babylon promulgated a set of laws (his Code) that among other things protected borrowers from what some people at the time must have perceived as rapacious lender behaviors. These laws focused on cash or in-kind interest rate ceilings, such as 33⅓ % per year on grain and 20% on silver, and safeguards to borrower welfare and livelihood in cases of default. Code 48, for instance, provided repayment extensions for cases of crop failure:

"If anyone owe a debt for a loan, and a storm prostrates the grain, or the harvest fail, or the grain does not grow for lack of water; in that year he need not give his creditor any grain, he washes his debt-tablet in water and pays no rent for this year." (King, n.d.)

Code 51, similarly, provides borrowers with alternative methods of payment:

"If he have no money to repay, then he shall pay in corn or sesame in place of the money as rent for what he received from the merchant, according to the royal tariff." (King, n.d.)

And Code 117 limited the extent to which indentured labor might serve to clear debts. A debtor could indeed

"…sell himself, his wife, his son, and daughter for money or give them away to forced labor…." However: "… they shall work for three years in the house of the man who bought them, or the proprietor, and in the fourth year they shall be set free." (King, n.d.)

Further expressions of Mesopotamian credit culture and law are manifest in the Hebrew Bible, written down about 1000 years later, facets of which anchor contemporary perspectives on credit. For instance, the idea of thwarting usury, preventing what appears as an exorbitant price for a loan, especially for low-income borrowers who might find repayment of high or any interest a challenge is clear in Exodus 22:25[1] prohibiting interest on loans to the poor:

"If you lend money to my people, to the poor among you, you are not to act as a creditor to him; you shall not charge him interest."

Likewise, on safeguards in cases of borrower default, Exodus 22:26[2] directs that:

"If you ever take your neighbor's cloak as a pledge, you are to return it to him before the sun sets."

The reason for doing this, Exodus 22:27[3] explains, is that the borrower will suffer needlessly. Useless to the lender, to the poor individual the cloak

"... is his only covering; it is his cloak for his body. What else shall he sleep in? And it shall come about that when he cries out to Me, I will hear him, for I am gracious.…"

The Bible suggests here that blocking high or any interest charges on the poor and exercising leniency in default have to do with social responsibility or justice, to assure the individual well-being of a poor person. The Bible also implies community welfare orientation.

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[1] Complete Jewish Bible https://www.biblegateway.com/

[2] Ibid

[3] Complete Jewish Bible https://www.biblegateway.com

This wider dimension finds first expression in Leviticus 25:36[4], which instructs the lender not to charge interest to a poor borrower to maintain good community relations:

"Do not take usurious interest from him, but revere your God, that your countryman may live with you."

Deuteronomy 23:19-20[5] then seems to take the objective of maintaining community cohesion to a higher level by extending the prohibition on charging interest to any member of the community, not just its poor members:

"You shall not charge interest to your countrymen: interest on money, food, or anything that may be loaned at interest. You may charge interest to a foreigner, but to your countrymen, you shall not charge interest..."

Similar refrains about usury repeat throughout subsequent sections of the Hebrew Bible, including Nehemiah, Psalms, Proverbs, Isaiah, Jeremiah, and Ezekiel. Opinions relating to the fair treatment of collateral and threats to borrower life and livelihood express themselves in both the Hebrew and Christian Bibles, among other places in Amos, Proverbs, Job, Hebrews, and Nehemiah. Many communities addressed such threats, as in Hammurabi's Code 117, by having a debtor in default forfeit ownership but not use of productive collateral. Thus, in default, a debtor might cede control of land, animals, tools, slaves, wives, and children to a creditor yet retain use of them if critical to livelihood and eventual loan repayment (Francis, 2007). In Greece, for example, the Laws of Solon (600 BC) put limits on interest rates, abolished self-slavery for debt payment and provided for debt reduction or cancellation in warranted cases (Homer & Sylla, 2005).

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[4] Ibid

[5] Ibid

With the Romans, the focus of attention concentrated more on the matter of pricing, with the assumption that a price cap was the best way to address welfare, 8⅓ % in 357 BC for instance (Homer & Sylla, 2005). Accommodations for terms of repayment were nonetheless pursued, such as limiting total interest payments to a maximum equal to the loan principal. Another restriction bars creditors from receiving more than a quarter of a borrower's income, a limitation that presumably lowered the likelihood that debt obligations would undermine borrowers' ability to provide for themselves (Homer & Sylla, 2005)

The spread of Christianity and the application of Biblical teachings in Europe repeatedly dampened credit transactions in Medieval and early Renaissance periods because credit was essential to trade, and prohibitions tended to quickly lose force as a result. The Council of Nicea banned clerics from charging usury in 325 AD. Pope Leo the Great forbade clerics taking interest and deemed lenders who did it guilty of sin (Homer & Sylla, 2005). Around 800 AD Charlemagne expressly forbade interest, defining usury as when "more is asked than is given" to anyone (Homer & Sylla, 2005). By the 11th century, the charging of interest was treated as theft, and civil prohibitions on it continued across Europe well into the 12th century (Homer & Sylla, 2005).

Such prohibitions were not workable, however. Besides putting a crimp on trade, life circumstances could very often require ordinary urban and rural dwellers to borrow funds. But with nowhere to turn for such funds, consequences for households could be dire. Recognizing this problem, by the 15th century Church authorities had shifted tack, from banning interest outright to providing, together with town governments and benevolent organizations, entities to provide credit to the needy at a lower price than charged by private lenders. Many of these were

"Mons Pietatis" and operated much like pawnshops. Since interest was not usurious, loan charges met the approval of Pope Paul II because they were called contributions to defray administrative costs (Homer and Sylla 2005). Thus, the Mons Pietatis in Italy at the end of the 15th century charged 6%, much lower than the 32% to 43% by private lenders on unsecured loans and the 20% by pawnshops on secured loans. The Mons Pietatis did not endure, however. Their low lending charge could not cover losses from bad debts, let alone increase lending capital, causing them to rely on recurrent replenishment from Church funds and charitable contributions to maintain lending operations (Patterson, 1899).

This dilemma contributed during the 16th century to the emergence of a distinction between usury and "fair interest"(Kaplan & Matteis, 1968). Protestant leaders of the Reformation objected less to the charging of interest than Catholic leadership, and so weakened earlier prohibitions. John Calvin, for one, set a maximum rate of interest at 5% in 1547 (Homer & Sylla, 2005). The ascendance of European industrial capitalism, demanding unfettered flow of funds to productive uses from the 17th century onward, further relaxed attitudes of authorities regarding interest, and in the early 19th century the Catholic Church finally accepted that charging interest was not itself a bad thing (Kaplan & Matteis, 1968). The problem was a perceived "unfair" rate.

This price issue appeared in the United States with the advent and spread of pawnshops, legally recognized for the first time in New York in 1803 (Francis, 2007). These were the most common sources of organized credit for households and small firms until the mid-20th century. The unfettered market interest and other costs they charged borrowers soon generated ire and policy intervention at all levels. New York City began to regulate pawnshops in 1812 (Levine,

1913). States soon followed with their own usury laws and the National Currency Act of 1874 limited interest to 7% (Holmes, 1892).

Such low-interest ceilings contributed to the emergence of the "salary lending" business, precursor to today's payday lender, offering wage earners a short-term, high-interest loan as an "advance" on future wages (Haller & Alviti, 1977). Predictably, salary lenders came under fire by advocates of fairness and under scrutiny by authorities. In the early 20th century several of them were targeted for criminal prosecution. However, policy-makers confronted the same dilemma as their Catholic Church predecessors of the 15th century who found it difficult to reconcile actions that restricted credit supply (e.g., low caps on interest) in the face of manifest demand for high-priced loans. To address the needs of poor borrowers, between 1910 and 1920 they began to reconstitute the "Mons Pietatis," now called benevolent loan societies, as an alternative to salary lenders. These became especially important within Jewish and Catholic immigrant communities (Haller & Alviti, 1977), but eventually dwindled in number.

Seeing profitability in rising demand for consumer credit, banks began to issue small-dollar loans in the 1930s. With increasingly restrictive regulations forcing salary lenders out of the market, banks faced less competition and gradually increased minimum loan sizes. Poorer people and others with demand for smaller loans were again left wanting. But not for long. New moneylenders appeared - in many instances salary lenders who re-invented themselves - to respond to small-dollar loan demand. Because they operated in the shadows under various business guises and often were tied to criminal gangs, critics lumped them together under the "loan shark" label (Haller & Alviti, 1977; Kaplan & Matteis, 1968). Loan sharks generally operated in the same way as salary lenders. The big difference lay in debt collection. Salary

lenders were legal entities and could use the court system to recoup monies. Moneylenders were illegal and, at the limit, used force to collect unpaid debts. Prosecutors began to go after the "loan sharks" under anti-racketeering and usury laws in the late 1930s and early 1940s, but the business thrived until the 1960s when regulatory changes allowed financial innovation such as credit cards and allowed rapid expansion of a variety of credit suppliers across the country, such as pawnshops (Haller & Alviti, 1977).

Though helpful for many, these sources were often not workable, especially for lower-income people. They might require more collateral than individuals possessed for the size of the loan they sought (e.g., pawnshops). They might demand income and asset qualifications that individuals could not meet (e.g., credit cards). They could demand time-consuming and complex loan processing procedures that were not consistent with the immediacy of need (e.g., banks and credit unions).

This unmet demand, combined with further deregulation in the 1980s, invited the return of salary lenders, now called payday lenders, offering speedy loans to just about anyone with a job and bank account (Rivlin, 2010). Exempt from usury restrictions, they were able to charge fees that many viewed as usurious when translated as annualized interest rates. And as one might expect given the history of such things, the high-interest rates then stimulated concerted efforts at national, state and local levels to restrict or ban payday loans altogether. For instance, together with other organizations, the Center for Responsible Lending pressed for municipal restrictions on loan terms and lender locations and state bans or restrictions on fees (Rivlin, 2010). Similarly, in response to the 2008 financial crisis, the Obama Administration created the Consumer

Financial Protection Bureau (CFPB) with a mandate to protect borrowers from "abusive" lending practices such as exercised by payday lenders (Fuchs, 2011).

So, although details differ, the pendulum of credit swings today in much the same ways as it did in the time of Hammurabi and in the times of all of his successors for the next 4000 years. When authorities are convinced that the price of credit is too high, is usurious, they clamp down on the practice in the name of preventing perceived hardship. When they sense that the cost of this action to prevent hardship for some is the provoking of hardship for many by the drying up credit supply, they relax the restrictions. And then the cycle, sooner or later, repeats itself.

More recently the focus of consumer finance policy has widened somewhat beyond price to include the cost of accessing credit. Kamleitner, Hoelzl, and Kirchler (2012) contend that the location of lenders influences borrower decisions on credit type. There is evidence that different neighborhoods contain different types of lenders (Cover, Fuhrman Spring, & Garshick Kleit, 2011; Damar, 2009; Gallmeyer & Roberts, 2009; Graves, 2003; T. E. Smith, Smith, & Wackes, 2008). Non-white and lower-income areas, for instance, contain fewer banks than white and higher income areas (Cover et al., 2011; Damar, 2009; Gallmeyer & Roberts, 2009; Graves, 2003; T. E. Smith et al., 2008). But it is not obvious that this shapes borrower choice. Concentration and scarcity of different types, as Prager (2009) suggests, may reflect variation in the creditworthiness of neighborhood residents. Payday lenders and pawnshops are more likely to locate near populations with lower credit scores because that is their market.

The new concerns about spatial accessibility have led to efforts to address "bank deserts" or neighborhoods with limited bank presence. The efforts, at least in the United States, began with the Community Reinvestment Act of 1977. At the time of the Community Reinvestment

Act, banks would use a practice known as redlining where they would avoid opening branches or making mortgage loans in areas with large numbers of non-whites, leaving those populations with restricted access to financial services (Moulton, 2012). More recently some states, such as New York, New Jersey, Louisiana, and Texas, have tried new interventions to address disparities in access through the creation of Banking Development Districts. The intent is to incentivize banks to open in neighborhoods with limited access to mainstream financial service providers such as banks and credit unions (Neiman, Dixon, Soadwa, & Franklin, 2010).

While the concern over spatial accessibility represents a broadening of focus beyond interest rates, it is still a matter of the price of credit. Some observers have pointed out that this specific focus on the price of credit, both direct (interest rate) or indirect (cost of access) price factors, neglects other crucial factors.

There is a theoretical and empirical suggestion that temporal factors play a role. The loan repayment period may influence the type of loan chosen (Abbott et al., 2013; Kamleitner, Hoelzl, & Kirchler, 2010; Wonder, Wilhelm, & Fewings, 2008). Borrowers wanting short-term loans would choose different lenders than if wanting longer-term loans. Loan processing time can also be important, especially when the need for cash is urgent (Johnson & Johnson, 1998).

Social influences, beyond shaping attitudes toward borrowing in general, can also affect the choice of lender (Kamleitner, Hoelzl, & Kirchler, 2012). The effects of social influences may partially explain lower bank use in ethnic communities, leading to speculation that borrowers there rely more on other sources of credit (Bohn & Pearlman, 2013; Osili & Paulson, 2004). Social attitudes have a substantial effect on what is considered an acceptable price of credit

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which may also explain the use of high-price credit in some communities (Homer & Sylla, 2005; Kamleitner et al., 2012).

There is the matter of trust as well. Those with trust in a lender based on prior positive experiences, or their repute within a social network, are more likely to borrow from that lender (Boyd, Leonard, & White, 1994; Cho & Haiyan, 2009). This may be an especially important factor in dealings between borrowers and moneylenders, where neither side has ready access to courts for dispute resolution. For first- and second-generation immigrants experiencing limited interaction with regulated lenders, the basis of trust may derive from shared experience and cultural understanding of respect for property rights in countries of origin (Osili & Paulson, 2008).

All the factors discussed would likely be important to different borrowers at different moments in time. However, for most consumers, price ranks high or highest on preference lists (Boyd et al., 1994; Kiser, 2002). While observers often think of this as a comparison between the price of one loan and another, that may not necessarily be the case. There is evidence, at least in surveys of payday borrowers reported by Lawrence & Elliehausen (2008), that comparison is often between the cost of credit from different sources and the expected benefits of obtaining a loan.

Given its central importance in decision making by borrowers and consumers generally, it is surprising that the literature, beyond passing mentions here and there, is mostly silent on this relationship. This is remarkable because basic tenets of consumer behavior analysis, as framed by the notion of utility maximization and assessed through cost-benefit analysis, for example, should make this relationship the center of concern. In this kind of framework, it does not matter

whether the price of one loan is 2% and another is 500%. Given specific expected benefits, 2% may seem exorbitant and 500% reasonable.

That studies of this relationship are rare in the research literature is not by itself a cause of concern. What may be of concern is that policy discussions also tend to ignore the relationship and may result in policies that cause harm despite good intentions. In fact, consumer finance policy continues to focus on protecting disadvantaged borrowers, rather than enabling access to credit. However, empirical evidence suggests that policy efforts associated with good intentions may not improve the financial wellbeing of consumers.

The question of whether these well-intentioned interventions improve borrower circumstances is not clear. Reductions in number of lenders and in loan sizes in states where policy interventions have been applied suggest that interest rate ceilings and fee limits designed to prevent usury may reduce availability of credit for those who use payday, pawn and other lenders (Li, Mumford, & Tobias, 2012; Prager, 2009; Shackman & Tenney, 2006; T. E. Smith et al., 2008). Since borrowers who use high-priced lenders typically do not qualify for other forms of credit, shifts to moneylenders or travel to lenders in policy-free jurisdictions may well have raised loan costs.

Similar or perhaps worse outcomes seem to have followed outright bans on some types of "predatory" lending. The Center for Responsible Lending, for instance, conducted a successful campaign to ban payday lenders in Georgia and North Carolina in May 2004 and December 2005 (Rivlin, 2010). Morgan and Strain (2008) report that this action was followed by a rise in financial distress, as indicated by increases in returned check rates, Chapter 7 bankruptcy filings and complaints against debt collectors. These outcomes were not intentional. In Ohio, a rate cap

of 28 percent was placed on payday loans, but this limit has mostly been ineffective as lenders have adjusted by changing their charter and fee structures (Peterson, 2013).

In addressing the demand side of lending, interventions have tried to educate borrowers on calculating the true costs associated with different loan types. The assumption is that because high-priced lenders present the price as a fee rather than an interest rate, borrowers are unable to compare different loans prices. Policies such as the Truth in Lending Act (TILA) of 1968, which requires lenders to disclose all costs associated with a loan, aim to provide borrowers with more information. This kind of approach, however, presumes that the only or main impediment to wise borrower decision making is information. Although there is undoubtedly scope for improvements in consumer knowledge, such policy actions appear to ignore or downplay other factors on the demand side that may limit what education can achieve.

To discover ways to shift toward policies that enable rather than restrict access to credit, this research develops a better understanding of how borrowers choose specific loan products by interviewing Cambodian Americans in Stockton, California, Lowell, Massachusetts, and Houston and Dallas, Texas to interview people about their borrowing decisions concerning banks, pawnshop, payday, and moneylender (i.e., informal, loan shark) loans.

While this population may not be representative of the general population of borrowers, I chose this group for several reasons. The first is that similar to other low-income communities, immigrants, or at least certain immigrant groups, exhibit low levels of bank use. Generally, immigrants have low levels of bank-based financial services (checking, savings, investments, etc.…) use, showing to be much less likely than their native counterparts to use banks (Bohn & Pearlman, 2013; Osili & Paulson, 2006, 2008; Rhine & Greene, 2006; Zhan, Anderson, &

Zhang, 2012). The rate of bank utilization seems to be especially low when immigrants live in areas with high concentrations of same-region immigrants (Bohn & Pearlman, 2013; Osili & Paulson, 2006, 2008).

As with other groups with low bank use, evidence suggests that immigrants are utilizing nonbank sources of financial services, mainly check cashing, money transfer, and bill pay services (Zhan et al., 2012). Zhan, Anderson, and Zhang (2012) do find evidence that many immigrants are keeping cash savings with the intention to make loans to others in exchange for interest, suggesting that unregulated credit is available to borrowers in these communities.

The final, and perhaps most crucial, reason is access. I had connections to both borrowers and lenders participating in the market for unregulated credit in these communities. The sensitive nature of this topic, including questions about personal finances, required the use of a gatekeeper. My existing connections were able to fill the gatekeeper role which allowed me to access borrowers and lenders in this community.

In what follows, I present the result of a broad investigation into the demand for unregulated credit. I begin in Chapter 2 with a spatial analysis looking at the issues related to credit access and low-income communities. Chapter 3 uses the results of interviews I conducted with both borrowers and lenders in these communities to discuss why some borrowers use unregulated credit and which factors are important in their credit choices. In Chapter 4 I use the factors, identified with the interviews, in a discrete choice experiment to understand the value borrowers put on these factors and how they are used when choosing a loan.

CHAPTER 2

CREDIT SUPPLY

One persistent idea in the realm of consumer credit is that low-income communities lack access to credit and that the solution is to increase access to "good" lenders, i.e., banks. This is based on a robust literature that suggests that many low-income communities do lack access to banks (Cover et al., 2011; Damar, 2009; Fowler, Cover, & Kleit, 2014; Gallmeyer & Roberts, 2009; Graves, 2003; Prager, 2009; T. E. Smith et al., 2008). This line of research has led to the idea of low-income neighborhoods being "credit deserts." The same research, however, shows that many times when there are fewer banks, there are other lenders, such as pawnshops and payday lenders. So, these low-income neighborhoods are not a desert in the true sense of the word.

If the absence of banks in some neighborhoods does not necessarily mean an absence of credit, it is possible that the same holds for immigrant communities. There is some speculation that those in immigrant communities do not lack access to credit despite the presence of few banks and lower rates of bank use (Bohn & Pearlman, 2013; Zhan et al., 2012).

In this chapter, I explore whether Cambodian immigrants suffer from an absence of credit or whether there are sources of credit that traditional research might be missing. To do this, I look at credit supply more broadly by including moneylenders (i.e., informal lenders, loan sharks) in addition to banks, payday lenders, and pawnshops. I used demographic data from the U.S. Census Bureau's 2010-2014 American Community Survey and lender locations from business database ReferenceUSA to look at the relationship between the number of immigrants and the number of lenders in a census tract.

Using the three negative binomial models below, I measured the log probabilities of a change in the number of lenders per 1,000 people in relation to a change in the concentration of the immigrant communities. Technical explanation of the models and variable definitions are in Appendix A.

Model 1:

$$\ln L(Bank_j | pop/1000) = \alpha + EC_{ij} + Income_j + Black_j + HISP_j + PovRate_j + ED_j + AFS1000_j + UE_j + \varepsilon$$

Model 2:

$$\ln L(Alternative_j \left| \frac{pop}{1000} \right) = \alpha + EC_{ij} + Income_j + Black_j + HISP_j + PovRate_j + ED_j + UE_j + Bank1000_j + \varepsilon$$

Model 3:

$$\ln L(Regulated_j | pop/1000) = \alpha + EC_{ij} + Income_j + Black_j + HISP_j + PovRate_j + ED_j + UE_j + \varepsilon$$

Though the focus of this research is Southeast Asian communities, I include variables for East Asian and Latin American ethnic concentration. Given that evidence indicates that education, income, and property rights protection in the country of origin can affect immigrants' choice to integrate financially (Osili & Paulson, 2006, 2008), it is essential to include these groups for comparison as the relationship may differ across immigrant groups.

As Table 2.1 shows, these groups make up a small percentage of the overall population in these counties which may mean that it may be difficult to assess the relationship between their population size and the overall number of lenders in a county. The literature suggests that a relationship can be found when immigrants live in concentrated communities or ethnic enclaves (Bohn & Pearlman, 2013; Rhine & Greene, 2006). Looking at Table 2.1 and Table 2.2, it appears that the maximum census tract populations are much higher than the means, indicating that they likely live in concentrated neighborhoods. Looking at the maps in Appendix B provides further

evidence that these groups are living in ethnic enclaves. If there is evidence of an absence of access to credit or certain types of credit, I expect to find it in these areas.

Table 2.1. Mean Census Tract Population Percentage by County and Group

| | Mean Census Tract Population Percentage | | | |
	Dallas	Harris	Middlesex	San Joaquin
Latin American	15.47	16.00	1.48	13.36
Southeast Asian	1.40	1.923	1.668	4.78
East Asian	0.81	1.139	3.124	0.84

Table 2.2. Maximum Census Tract Population by County and Group

| | Maximum Census Tract Population Percentage | | | |
	Dallas	Harris	Middlesex	San Joaquin
Latin American	58.25	64.11	19.73	38.63
Southeast Asian	15.15	23.11	25.59	21.34
East Asian	15.00	15.51	23.24	6.50

First, I examined the relationship between the population concentration and the number of banks in their neighborhoods. If the Southeast Asian and Latin American groups are similar to low-income populations discussed in the literature, then there should be fewer banks and more payday and pawn lenders as the group makes up a larger percentage of the population. The East Asian group, being more self-selected and financially integrated should show the opposite relationship, with more banks present as their portion of the population increases. Table 2.3 shows the results from the models examining the relationship between these communities and number of lenders per 1,000 people.

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Table 2.3. Relationship Between Ethnic Concentration and Lenders

	Log odds of an additional lender per 1,000 people		
	Banks	Payday/Pawn/Auto	Regulated
Intercept	-0.597**	-2.526**	-0.588**
	(0.156)	(0.215)	(0.143)
Southeast Asian	-0.054**	-0.048**	-0.063**
	(0.013)	(0.016)	(0.011)
East Asian	0.103**	-0.042	0.082**
	(0.015)	(0.028)	(0.014)
Latin American	-0.023**	0.047**	-0.005
	(0.005)	(0.006)	(0.004)
Income	0.009**	0.006	0.014**
	(0.003)	(0.004)	(0.003)
Black	-0.017**	-0.001	-0.011**
	(0.003)	(0.003)	(0.002)
Hispanic	-0.007**	-0.019**	-0.008**
	(0.001)	(0.003)	(0.001)
Poverty Rate	-0.005	0.017**	-0.006
	(0.005)	(0.006)	(0.005)
Education	0.007**	-0.007*	-0.007**
	(0.002)	(0.003)	(0.002)
Unemployment	-0.100**	-0.009	0.070**
	(0.016)	(0.017)	(0.013)
Other Lenders	1.318**	0.173**	
	(0.176)	(0.032)	
Theta	0.676	0.575	0.736
	(0.042)	(0.052)	(.040)

Notes: *p < .05; **p < .01;

The results show that the relationship between banks and both Southeast Asian and Latin American populations is negative. This means that as the Southeast and Latin Americans make up a larger portion of the population, there are fewer banks. The relationship implies that these two groups experience a lack of bank access, like that experienced by other low-income communities.

This is consistent with previously mentioned studies by Bohn & Pearlman (2013), Osili & Paulson (2006, 2008), Rhine & Greene (2006), Zhan et al., (2012) which all provide evidence that certain immigrant groups are less likely to use banks, especially when living in ethnic enclaves.

As discussed in the introduction, the literature on spatial access to banks argues that low-income communities that have few banks have more payday and pawn lenders. There is some evidence suggesting that immigrants use checking cashing and wire transfer services which are often provided by the same businesses that act as payday lenders and pawnshops (Zhan et al., 2012). So, it is possible that immigrant communities also have access to more payday, pawn, and auto title lenders.

Indeed Table 2.3 shows that like other low-income communities, Latin American immigrant communities have access to more payday, pawn, and auto title lenders. For Southeast Asians, however, the number of payday, pawn, and auto title lenders is lower as their proportion of the population increases. This indicates that they also lack access to the types of lenders typically found in low-income communities. Given they lack also lack access to payday lenders, pawnshops, etc., the question is: do they experience a general absence of credit in their neighborhoods?

Further, the final column in Table 2.3 shows the results of access to all types of regulated lending in these communities. The dependent variable in this final model is the total number of banks, payday lenders, pawnshops, and auto title lenders in a census tract. Southeast Asians have access to fewer total regulated lenders as their population increases.

The negative relationship between Southeast Asian immigrant communities and the number of regulated lenders seems to suggest that these borrowers may live in a true credit desert. This, however, is an incomplete picture of credit supply in these communities. There is

research, although mostly speculative, that borrowers in these communities have access to unregulated credit (Bohn & Pearlman, 2013; Zhan et al., 2012).

I conducted site visits to all three communities and found that unregulated lending exists in these Cambodian communities. Borrowers have access to moneylenders through several mechanisms, including storefront lenders. Due to the secretive nature and unwillingness of other moneylenders to disclose their personal addresses, I was limited to collecting locations of the storefront lenders.

Because this type of lending was only prominent in Lowell, I only have enough data to examine spatial access in that community. So, with this incomplete dataset, Model 4 provides an illustration of the availability of moneylender credit in what at first appeared to be a credit desert in Middlesex County.

Table 2.4 shows the results of the moneylender model for Lowell as well as the results for the bank and other lender models for Lowell. The results of Model 4 indicate that this Southeast Asian immigrant community has greater access to moneylenders, at least those lenders operating out of storefronts, as their population increases. There are more storefront moneylenders where immigrants make up a larger percentage of the population. In comparison to banks and regulated lenders as a whole, immigrants in this enclave are more likely to have access to moneylenders. So, it appears that they are similar to other low-income communities in that while that may lack access to some source(s) of credit, they have access to other sources.

While this provides a limited picture of credit access, it does suggest that these communities have access to a credit supply that resembles the supply available in similar non-immigrant communities. Like other low-income borrowers, immigrants may lack access to banks

in their neighborhoods, but have access to other sources of credit. The only difference being that for immigrant communities, it appears to be moneylender credit rather than payday lenders, pawnshops, etc. Analyzing access under a conventional view of credit supply would likely miss this important dynamic. The result would be a misreading of financial services access in immigrant communities.

What the foregoing suggests is that while low-income communities may or may not lack access to some type(s) of credit, there is not an absence of credit. Whether the density of these low-income populations drives access is a question that cannot be answered by spatial analysis. While there is research which suggests that location can affect the choice of a financial institution (Kiser, 2002), economic theory predicts that businesses will locate where there is demand for their product or services (Berry, 1992; Quint & Einav, 2005).

If, as economic theory suggests, different types of lenders are locating where demand for their services exists, what is driving that demand? This too is a question which cannot be answered through spatial analysis. In the next chapter, I present the results from an investigation into what factors drive demand for high-priced credit.

Table 2.4. Relationship Between Ethnic Concentration and Lender Type in Middlesex County

	Log odds of an additional lender per 1000 people		
	Banks	Regulated	Unregulated
Intercept	-1.063	-3.726**	-4.822
	(1.358)	(1.347)	(5.349)
Latin American	0.309	-0.001	-0.177
	(0.366)	(0.026)	(0.125)
Southeast Asian	-0.933*	-0.047	0.174**
	(0.412)	(0.029)	(0.046)
East Asian	0.187	0.022	0.160*
	(0.324)	(0.021)	(0.066)
Income	-0.854**	0.091**	-0.030
	(.307)	(0.020)	(0.074)
Black	-0.246	-0.014	-0.303*
	(0.197)	(0.015)	(0.130)
Hispanic	0.218	0.025	-0.045
	(0.179)	(0.013)	(0.054)
Poverty Rate	-0.502	-0.031	0.217**
	(0.274)	(0.019)	(0.070)
Education	-0.141	-0.016*	0.053
	(0.328)	(0.007)	(0.046)
Unemployment	0.696	0.051	-0.312
	(0.757)	(0.053)	(0.198)

Notes: *p < .05; **p < .01;

CHAPTER 3

DEMAND FOR UNREGULATED CREDIT

The foregoing suggests that a scarcity of banks in lower-income communities, contrary to what some observers claim, does not necessarily mean limited access to credit in general. In some, perhaps many areas, such as the ones studied here, credit is supplied by other regulated lenders such as pawnshops and moneylenders. Several scholars have pointed this out (Bohn & Pearlman, 2013). The literature, however, is empirically thin with regard to examining the demand side of credit, to understanding how bank and nonbank regulated, and moneylenders, respond to consumer lending needs, and how borrowers choose between different suppliers.

To shed light on these dimensions, I interviewed borrowers, nonborrowers, lenders, and community leaders in Stockton, CA, Lowell, MA, and Dallas and Houston, TX. Using a snowball/chain sampling method in these communities I conducted semi-structured interviews, lasting approximately one hour (see Appendix C). Table 3.1 provides a breakdown of the sample by interviewee type. The purpose of these interviews was first to gain an understanding of the types of credit being used and then secondly to understand the circumstances and choices of borrowers.

My first discovery was that a substantial portion of borrowers rely on or are at least have access to moneylenders, indicating that this type of credit plays a significant role in community finances. In fact, moneylenders appear to be the primary source of credit, especially small dollar loans.

Table 3.1. Interview Sample

	n
Borrower Using Unregulated Credit	17
Borrower Not Using Unregulated Credit	5
Lender	7
Community Leader	3

In this way, unregulated lending in these communities in many ways fills a role similar to that of payday and pawn credit in other low-income communities. They offer loans that provide cash quickly, with less stringent approval requirements but come at a higher price than what may be available through banks.

As with regulated lending, unregulated lending occurs through several types of lenders. In the Cambodian American community there two categories of moneylenders; one for large loans and one for small loans. The distinction is important because the differing loan size implies different needs. The needs of someone borrowing $5,000 are fundamentally different than those of someone borrowing $500. The difference in credit needs likely changes how borrowers decide between lenders and loan types. I found both types present in each of the study areas. Below, I discuss the types of moneylenders available in each area along with the terms associated with each type of lending.

Large Loans

For larger loans, borrowers in these communities mostly turn to a source of credit they call Thung Thing. Thung Thing is a type of rotating credit and savings associations, and are

common in many immigrant communities. As with other communities, rotating savings and credit association play a critical role in household finances.

Rotating savings and credit groups consist of a group of borrowers who pool money by contributing a set amount every month (Baixeras Donoso, Altunbas, & Kara, 2011; Banerjee & Duflo, 2006; Eroğlu, 2010; Handa & Kirton, 1999; Levenson & Besley, 1996; Oh, 2007; Pham & Lensink, 2007). The group is run by a manager, referred to as a "dealer" in this case, who runs the group and collects the monthly contribution.

In the Cambodian version, the dealer operates the group as a for-profit enterprise rather than a collective assistance group. In this system, participants place a bid to take the withdrawal during that turn. The bid represents the amount that the borrower is willing to pay all other members of the group in exchange for taking the money. The highest bid "wins" the turn and the "winner" is no longer eligible to bid on future turns or receive future interest payments. The dealer is guaranteed the final turn and is, therefore, able to collect interest from all participants without paying interest for their turn. Dealers, however, are quick to point out that with the lower borrowing cost comes a significant amount of risk especially in the case where the pot value is high. Should any member leave the group or otherwise not meet their obligation, the dealer is responsible for making the contributions on behalf of that member. Given that the total contribution from each group member typically exceeds $1,000, this can be a potentially expensive risk.

The loan sizes, otherwise known as the pot, are much greater than what can be obtained from the other sources of unregulated credit. In terms of size, rotating credit can be compared to personal loans from banks or auto title loans. In one case the group consisted of ten members

with a pooled amount of $10,000. In Lowell, one dealer relayed a story about another dealer who needed structural repairs to her basement and couple from Dallas started a high-value group to raise the capital to open a retail business. In these cases, the group creates a larger pot through the inclusion of more members, higher contributions, or a combination of the two. These changes in contribution amounts and the number of members can affect the price of borrowing.

In the rotating credit system, the cost of borrowing is decided in an auction. Group members bid an amount that they are willing to pay each other member of the group in exchange for taking the turn. The highest bid wins the right to borrow during that turn. If the winning member bids $100 in the auction, this means that this member pays a total of $1,000 to get the $10,000. Assuming this is the first turn, the person is paying $1,000 to borrow $9,000, which translates to an annual percentage rate (APR) of approximately 13 percent without compounding. As group membership or contribution size grows so does the competition for the pot. For a member to ensure "winning" the turn they must place a bid higher than what may be necessary for a smaller group.

Large contribution and group size also carry a greater amount of risk. Borrowers worry that there is a greater temptation for a dealer to flee with the pot after collecting the contributions. Dealers worry that borrowers are more likely to abandon their responsibility by leaving the group after taking their turn. The dealer must then cover that member's contributions for the remaining rotations.

The risk increases for dealers as the community's population grows. In larger communities, relationships are more distant, meaning dealers have less information about members. The lack of information makes it more difficult for dealers to determine

trustworthiness or to track down defaulting members. Rotating credit is becoming less common in some areas, and while it does still fill an important role, it is not the main source of credit.

Small Loans

The main source of credit in the Cambodian community are lenders of small loans. Small loans are made directly from a single lender, either a person or business, directly to borrowers. This type of lender is what some call an informal lender or loan shark, but I prefer the term of moneylender.

Moneylenders profit by charging their borrowers an interest rate or fee. Moneylenders present the charge to borrowers in terms of a fee rather than an interest rate. This fee structure is very similar to that of payday loans. It typically comes in the form of X number of dollars per month per Y dollars borrowed. The most common measure cited in the interviews is $10 per $100 per month. This is ten percent per month which translates to an APR equivalent to 427 percent. In some cases, loans are made at lower rates $7 per $100 per month in some cases and even as low as $3 per $100 per month for one borrower. The lower rates occur in the case of a strong personal relationship or a long credit history between the borrower and lender.

Borrowers and lenders seem to view the price, effectively simple interest, almost as a fee for renting the money, much like renting a television from a rent-to-own store. There is an initial repayment term, usually of one month, but it is rare that either party expects the principal to be repaid at that time. It is more common for borrowers to pay the monthly fee to extend repayment beyond the initial loan term than for them to repay the loan within the initial term. The term itself is meant more for calculating the loan fee and setting a payment schedule. This is very similar to

what studies have found in respect to regulated short term credit, specifically payday loans (Lawrence & Elliehausen, 2008).

Loans from moneylenders are also similar to those made by payday and pawn lenders lenders in terms of loan size. Typically, these loans are in the range of $200 to $1,000. As for the purpose, most lenders said that they never ask, as they consider the topic taboo. Some moneylenders were willing to speculate that their customers are borrowing to cover some regular monthly expense (e.g., rent, utilities, etc.) or some unexpected expense such as car repairs, not unlike the needs cited by those using payday and pawn loans (Johnson & Johnson, 1998; Lawrence & Elliehausen, 2008).

Loans of this size are almost always secured using collateral in the form of gold jewelry. In fact, one interesting aspect discovered during the interview process is that participants were unfamiliar with the term collateral but understood using gold to secure a loan. In the case of larger loans, automobiles or boats can be the collateral. While the overwhelming majority of loans are backed by collateral there are rare cases in which unsecured loans are made based on history, reputation, or relationship. To the extent that these unsecured loans do exist, they take place between a borrower and lender who have developed trust through a close personal or business relationship.

With collateralized loans, there is the issue of what to do with forfeited collateral when borrowers default. Lenders must appropriately value gold to protect themselves against the daily price fluctuations of gold. Lenders also must find a way to liquefy forfeited collateral. This is somewhat easier for moneylenders operating through an existing storefront business, usually a jewelry store or some other form of retail because they can sell the forfeited gold through that

business. Those without a storefront business sell forfeited collateral to jewelry stores and pawnshops.

Assessing default risk becomes more difficult as the community grows, and relationships become more distant. While the collateral protects lenders from loss, it is an inconvenience that if a frequent enough occurrence can dissuade some from lending. This is, according to participants, is the reason that lending in the study area with the largest Cambodian community has moved. As one former personal enterprise lender said:

"I had to stop…too many people here now. They borrow money then move…to anywhere…maybe even go back to Cambodia. I don't know their family. I cannot go find them in Cambodia."

Despite these risks, unregulated lending is profitable and readily available in all study areas. Which introduces the question of: Why does the demand for unregulated lending exist? To answer this question, I interviewed both borrowers and nonborrowers in these same communities.

Borrowers

Unsurprisingly, as with payday and pawn lending, the interviews revealed that the main difference between those using unregulated lending and those who are not is income. Borrowers who use moneylenders usually have a low income. In the cases where borrowers were not low income, they report using rotating credit for large expenses such as starting a business.

Nearly as stark are differences in age and immigrant cohort. Younger participants and those more removed from the immigration point are less likely to use moneylenders. However, it appears that the type of community influences this difference. The age and immigrant cohort differences are smaller when borrowers live in concentrated immigrant communities. In Dallas,

where the community is dispersed, I found fewer younger and second-generation Cambodian Americans using unregulated lending than I did in the more concentrated communities of Stockton and Lowell. This seems to indicate that there is some cultural persistence in larger more established communities.

One area in which age appears to make the most apparent difference concerns the reason for the cash shortfall. Younger borrowers have a need for credit that is driven by having low incomes. They have some form of income but one so low that there is no margin for error. They lack savings to cover emergency or unexpected expenses because their income is too low to allow saving.

While many older borrowers live on a fixed income, lenders and community leaders explain that the inability to meet expenses comes from using their fixed income to make donations to Buddhist temples. Older borrowers will have used their Social Security or other income to make contributions to temples in the area or Cambodia, leaving them without enough money to pay bills.

"These old people…they think that they must donate to the temple for a good afterlife. Maybe they do not trust their kids to contribute or feed the monks after they die. So, they donate to temple(s) here and donate to temple(s) in Cambodia. Sometimes maybe three, four, five temple(s)…Now they do not have money to pay their bills."

While it may appear that older borrowers cannot cover necessary expenses because they seem to spend on non-essential expenses, this is a false perception. To older Cambodians, many of whom are deeply religious, contributing to temples is a necessary expense like rent or groceries. This means that just as with young borrowers, their income is too low to meet what they consider necessary expenses.

Borrowers reported that the expenses for which they are borrowing are often some recurring monthly expense such as rent or utilities, or an emergency expense such as auto repair. This is similar to those using other sources of high price credit (Johnson & Johnson, 1998; Lawrence & Elliehausen, 2008).

Whether a recurring or emergency expense drives the need, it is usually some need that is critical to the wellbeing, financial or otherwise, of these households. Not meeting these expenses comes with substantial direct or opportunity costs. Even if a borrower has family to take them in after eviction, they will need money for a deposit and two months' rent before they can secure a new place to leave. For those less fortunate, the cost may be ending up in a homeless shelter and leaving behind their possessions. The cost of not meeting emergency expenses can be just as high. In the words of one borrower: "If I do not get a loan, I cannot get my car fixed. If I do not have a car, then I cannot get to work, and maybe I get fired."

If the cost of not meeting the need is high, then so is the cost of loan rejection. When the cost of loan rejection is high borrowers put greater emphasis on the lender's approval requirement. One of the most frequently reported considerations by users of unregulated credit is the approval requirement. Many of those participating in the interviews had concerns about their ability to qualify for credit from lower cost options such as banks. Borrowers with concerns about approval requirements will not seek loans from lenders with more stringent requirements such as credit score, bank account, and income verification. They instead seek loans from moneylenders whose only approval requirement is gold as collateral.

"I have to open an account and put money in there. Then I have to go to the bank and fill out so much papers. I can call [Moneylender] and take him some gold. Then I get the money and pay my bill. No paper, no bank account, no nothing."

This behavior indicates that borrowers are doing some self-assessment of their creditworthiness and then seek a loan for which they have the highest likelihood of approval. These assessments, in most cases, are likely correct. Residents of these communities are foreign-born, and either have not had time to or never tried to build a credit history that would give them access to bank loans. Others, who could perhaps meet the requirements, find the process of opening a bank account or providing documentation to be too onerous and prefer the simple approval process of an unregulated loan.

Those using moneylenders not only prefer loans with low approval requirements, but they also need money quickly. If rent is due this week, waiting for some types of loans may not be a choice. A personal loan from a bank typically takes 7-10 days for a borrower to receive funds after applying for the loan. That timeline may result in eviction if their expense is rent, which may help explain why borrowers are choosing moneylenders who can deliver the loan that day, rather than seeking lower-priced alternatives. The interviews with borrowers and lenders revealed that unregulated loans have a processing time that is typically less than a day, much like payday and pawn loans. Borrowers said that this quick processing time is something that they prefer even when lower priced alternatives are available because they can request the money today and pay their rent, utilities, etc. by the next day.

"If I go to the bank, it might take a week to get the money. If I call up [Moneylender], I can get my money today. I need to pay my rent now. I cannot tell my landlord to wait a week. He will kick me out."

Another important factor is the repayment term. These borrowers had a different view of credit transaction than do those who use banks. This group of borrowers does not consider repayment term to be a final repayment date. In fact, many borrowers acted as if they had an

indefinite repayment schedule in mind. Instead, they intend to pay the fee every month until they have enough funds to repay the loan principal. To put in more familiar vocabulary, they roll over the loan by paying the interest by the due date, much in the same way many payday borrowers do. In this sense, they view it more of a rental agreement much in the way someone might rent a sofa or television from a rent to own store. Many borrowers say that this flexibility allows them to repay the principal when they are more financially secure, rather than sacrificing their ability to meet other expenses by repaying the loan now.

There are also social and cultural factors that clearly play a role in credit decisions. These social factors relate to trust between the borrower and lenders. Borrowers and community leaders say that trust, or rather lack of trust, in institutions is a major factor in their choice of financial service. Past experiences in Cambodia have left people in the community distrustful of government and financial institutions such as banks. This lack of trust leads many, especially those who are first generation, to avoid using banks for any financial service. They do not have checking or savings accounts, nor do they borrow from banks. This, of course, limits their ability to qualify for bank loans.

"In Cambodia, you put your money in the bank. Maybe you are able to save some money, but then the government decides you have too much money. Then the government just takes your money. People come here, and they still think that way. I've worked at a bank for fifteen years, and my parents still will not use it. I get people who come to me for a loan, but they don't qualify because they have no credit history or bank account."

Another area of concern for borrowers is trusting the lender to exercise discretion with respect to government reporting. Many of the borrowers receive Social Security, Social Security Disability, TANF, SNAP, or some other government aid. Borrowers understood that banks report transactions and feared that if the loans are reported that they will lose some or all the aid they

receive. "If the government finds out that I borrowed money, I will lose my Social Security." They trust that moneylenders would not report this information to the agencies administering these benefits.

The final aspect of trust is believing that the lender will treat the borrower fairly. Borrowers, when choosing a lender, prefer to use one with whom they have some existing relationship. Borrowers develop a trust that a lender will treat them fairly through past lending or personal interactions in the community. According to participants, fair treatment from a lender includes getting fair fee and value for collateral when taking a loan. The former seems to be especially important given that most community with whom I spoke did not know the current price of gold.

Concerning the use of gold, borrowers also need to trust that lenders will return the exact item that was put up for collateral. The jewelry used as collateral often has some personal or cultural significance attached. Many times, these pieces of jewelry were gifted to the individuals as infants and meant to bring a lifetime of good fortune or to protect against evil spirits. Other times the jewelry has been passed down from deceased relatives and carries sentimental value. In either case, borrowers expect to receive that specific piece of jewelry returned once they repay the loan.

To the extent that borrowers did show concern about price, it was when comparing loans between the same type of lender. While I found loan prices to be somewhat standard, many borrowers said they "ask around" to see which lender offers the lowest price. Perhaps one lender is offering $10 per $100 but a lender another lender may offer $7 per $100 when they know the borrower has another offer or because they have less concern about default. So, while price is a

concern, it appears that borrowers consider price when choosing between loans of the same type rather than choosing between different types of lenders.

The fact that borrowers consider price after deciding on a type of loan, may indicate that it is a secondary concern. Borrowers may have first considered non-monetary factors such as approval requirement, processing time, and trust to choose their type of lender. In doing this, borrowers seem willing to accept that they will pay a higher price for their loan. This willingness to pay more implies that they put some monetary value on an increased likelihood of approval, faster transaction, etc.

One can look at this implied value in terms of the benefits borrowers receive from the loan. Looking at the type of expenses (rent, utilities, auto repair, etc.), these borrowers have a need for which they incur a large cost should they not pay (e.g., eviction, job loss, etc.). For these borrowers, the benefit received in the form of shelter, electricity, transportation to work, etc. is great enough to justify the higher price that comes with easier or faster loan approval.

In judging the benefits they receive to be greater than the price of credit, borrowers act as if they are doing a cost-benefit analysis. If borrowers are indeed looking at credit transactions in terms of cost-benefit, it is essential that we understand borrowing in those terms. For a complete understanding of the cost-benefit comparisons, we must understand the value that borrowers place on the benefits.

Finding the values of benefits can be a challenging task. Identifying these values with any precision is undoubtedly beyond the capabilities of interviews and likely requires a larger sample. In the next chapter, I discuss the results of a choice experiment that I conducted with an expanded sample. This allowed me to measure the relative value of the benefits borrowers

receive from these loans and examine how borrowers use their preferences for these non-monetary factors in their credit decisions.

CHAPTER 4

BORROWER DECISIONS: A CHOICE EXPERIMENT

Findings of the interview process discussed above indicate that borrowers decided among prospective lenders and loans based on several factors, such as processing time and trust, not just price. If borrowers are presumed to be rational actors, and if they choose relatively costly loans then the only permissible inference, or hypothesis, is that incorporation of the other factors into the decision process offsets the money price of credit.

The characteristics of my interview data, largely exploratory, do not permit robust testing of this hypothesis. However, through the incorporation into the interview of a discrete choice experiment, the data do allow useful insight on how borrowers weight various factor combinations when they choose among lender and loan alternatives. This helps to explain why they might prefer higher- to lower-priced loans.

The first step in the weighting process is assigning a value to each of the factors that borrowers use in their decisions. One issue with assigning value is that many decision factors named in the consumer credit literature, such as trust and transaction speed, are hard to monetize. It is therefore hard to grasp how and to what extent these factors influence borrowing choice. One way to address this in a cost-benefit framework is to imply values through contingent valuation, or CV (Bateman et al., 2005; Diener, O'Brien, & Gafni, 1998; van der Pol & Cairns, 2001). A method of CV that has shown itself helpful, notably in health economics research, is the Discrete Choice Experiment, or DCE (Lancsar & Savage, 2004). It produces implicit indicators of willingness to pay for tangible or intangible something of value, such as preferences for waiting time, travel time, health outcome and similar treatment or care attributes (Kerr et al.,

2016; Louviere, Islam, Wasi, Street, & Burgess, 2008; McIntosh, 2006; Nieboer, Koolman, & Stolk, 2010). Applying a similar approach to implicit valuation of trust, processing time, loan term and other factors thus seems worthwhile (Abbott et al., 2013; Boyd et al., 1994; Cho & Haiyan, 2009; Kamleitner et al., 2010, 2012).

To the extent that valuations vary with borrower circumstances – the worth of reduced transaction speed may be higher the greater the degree of urgency for instance – application of the DCE approach requires incorporation of decision contexts to reduce error (Tversky & Simonson, 1993; Smith & Moore, 2010). The Stated Preference Discrete Choice Experiment (SPDCE), a DCE variant, does this. It produces indicators of utility, i.e., implicit value, conditional on an individual's stated preferences and circumstance, providing a marginal utility for a specific level of an attribute, such as payback period (McIntosh, 2006).

Implementation of the SPDCE relies on the Choice Based Conjoint (CBC) method. Here interviewees decide among choice sets with different attribute values, an exercise that mimics consumer purchasing processes in the market (Orme, 2008). I presented scenarios to interviewees showing specific borrowing purposes and, based on findings from the analysis of earlier interviews, a set of alternative loan attributes and combinations. Individuals then chose characteristics and combinations they prefer for a loan amount and need, such as $500 for rent.

One limitation of this approach was that I could only present borrowers with one scenario. It is likely that their preferences will vary with the circumstances in which they are borrowing. A borrower may place a different value on the loan processing time if paying rent than they would if needing to pay a medical bill. To accurately capture the context in which

borrowers make credit choices, the scenario must reflect a need that was common among participants, a common value for the need, and a level of urgency.

For this group of participants, a return to the interview results revealed that for most borrowers the use of credit is for paying rent or utilities. Slightly more participants named rent as the reason for borrowing and given that for most this would be an issue of high urgency, I used rent as the borrowing need in the DCE scenario. I chose the expense value of $500 because it was the average loan size and created a scenario in which many borrowers could envision having a partial rent payment. I used a partial rent payment because interview participants never claimed not having any money to cover the expense but instead that they did not have enough money or were "short."

From this, I presented borrowers with a scenario in which they need to borrow $500 to pay rent. The DCE presented each participant with choice sets which consisted of three loans. Each of these loans had five attributes; Minimum Price, Processing Time, Approval Requirement, Repayment Term, and Lender, which gave the DCE a three by five design.

In all cases, loans were presented in terms that borrowers understood. During pre-testing, I discovered the need to convert the original interview questions from standard credit jargon into equivalent concepts and wordings that are meaningful to Cambodian American respondents. For instance, I abandoned the idea of asking about the price of a loan by an "interest rate" because this phrase meant nothing to most interviewees. Instead, I asked for the dollar amount paid per loan value per unit of time, e.g., $10 per $100 per 30 days. The concept of amortization, i.e., of gradually paying back a loan, also proved problematic in many instances because, conceptually, the $10 price is payable in perpetuity – equivalent to the notion

of simple interest – until the $100 is eventually reimbursed as a lump sum. In conforming to participant understanding the cost of borrowing is listed as Minimum Price. Here I defined minimum price as the minimum amount paid if the loan is repaid in one month or less.

Likewise, the term "collateral" to designate an asset deposited with a lender as loan security to assure repayment did not register in interviews because there is only one thing that guarantees a loan: gold. Using the term collateral was confusing to many of the participants. When describing collateral as using something of value to secure a loan, respondents often asked if I meant gold. When describing it as using gold to secure the loan participants were very familiar with the concept.

A key factor in any type of lending is trust, and as seen in the interview results, it is especially important to those using unregulated credit. Lenders must trust borrowers to repay, and borrowers must trust that lenders will not break written or unwritten loan contracts. The latter can be especially important in the case of unregulated lending, as written contracts are almost nonexistent. Given that this is a consideration that can influence the choice of lender, it was important to capture with the DCE. I suspected that the primary indicator of trust in this community might be cultural and personal proximity. The lender is or is not Cambodian. If Cambodian, the lender is or is not personally known to the borrower. To capture this the DCE had a lender attribute which consisted of levels [Same Ethnicity] Person I Know, [Same Ethnicity] Person I Do Not Know, American I Know, and American I Do Not Know. The use of American may seem overly broad, but once again the choice reflects adapting the terminology of the participant community.

Once properly conceptualized, the DCE incorporated these factors as the loan attributes. Each loan presented to participants consists of five attributes; Price, Processing Time, Approval Requirement, Repayment Term, and Lender. Each of the loan attributes had four levels as shown in Table 4.1.

Table 4.1. Loan Attributes and Levels

Attribute	Level 1	Level 2	Level 3	Level 4
Price	$4.25	$7.50	$50	$75
Approval Time	< 1 Day	1-2 Days	3-4 Days	5-7 Days
Approval Requirement	Gold	Proof of Employment	Bank Account	Credit Score
Repayment Term	7 Days	14 Days	30 Days	183 Days
Trust	Khmer Person I Know	Khmer Person I Do Not Know	American I Know	American I Do Not Know

Participants were presented with ten choice sets, see Figure 4.1 for an example. I conducted pretesting with versions that contained more choice sets, but interviewees became disinterested after ten, so I limited the final version to ten. With a sample size of 120 each getting ten choice sets, the DCE collected 1200 choices, which produced enough data to create sufficiently robust utility estimates.

If you need to borrow $500 for rent which of these loans would you choose?

(1 of 10)

Minimum Price	$75	$4.25	$7.5
Approval Time (Time it takes to get the money)	1 to 2 Days	5 to 7 Days	3 to 4 Days
Approval Requirement	Proof of Employment	Gold	Credit Score
Repayment Term	30 Days	14 Days	183 Days
Lender	Khmer person I already know.	An American I know.	An American I do not know.
	Select	Select	Select

Figure 4.1. Choice Set Example

An additional concern with a DCE is the potential for order bias. To guard against such bias the software is set to randomize the combinations in the choice sets. Because credit markets consist of very specific credit options, three choice sets were fixed to ensure that all borrowers receive three combinations that accurately reflect options available in the credit market. These three choice sets each offered loan options reflecting bank, payday, pawnshop, and moneylender loans.

At the end of the exercise, I asked participants to answer several demographic questions to be included as control variables and for borrower classification purposes. I followed these with two questions meant to capture their stated preferences. The first of these questions caught their preference for the type of lender. These are Bank, Pawnshop, Payday Lender, and Moneylender. The second captured their preference for loan attributes such as processing time and price.

In choosing the sample for the experiment, I use a chain/snowball sampling method. The interviews cover sensitive information such as the source and amount for the most recent loan taken by participants and therefore needed a gatekeeper to gain the trust of individuals. The sample began through existing personal connections to borrowers, lenders, and community leaders in each of the study areas. The total sample for the experiment includes 120 participants.

Although I did not directly ask about income, I classified the sample as mostly low income based on the makeup of the census tracts in which they live. Through an exploratory analysis of census tract data, the communities in the areas in which most of the participants live have median incomes lower than the median income for their county. My exploratory analysis also reveals that the percentage of households earning less than $50,000 per year increases as the population percentage of the study group increases. This finding is important because earlier research has revealed that $50,000 is the income level at which the use of high price credit decreases.

I also collected age and country of birth for participants in the choice experiment. The sample is composed of 76 participants under fifty years old and 34 who are fifty years old or older. A majority of the sample is foreign born with 76 participants being born outside of the United States.

As for the type of borrowers, among those taking part in the interviews or choice experiment 57 use bank credit, 53 participants report using some high price lender, and 10 declined to name a source. I suspect that those declining to name their credit source are using some form of high price credit, given the social stigma associated with using high price credit

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and the secretive nature of unregulated credit. For those using high-priced lenders, 49 used moneylenders.

Descriptive Statistics

The analysis begins with a look at the counts and frequency distributions for the sample. There was a total of 127 attempts on the DCE with 120 participants completing the exercise. A total of 110 identified a type of lender they would use in the scenario presented in the DCE. Fifty-seven borrowers used Bank/Credit Union, and fifty-three identified one of the high-priced options as their credit source. Ten declined to identify a lender preference and were excluded from the stated preference analysis.

Participants were also asked to identify the most important decision factor when they needed to borrow for a similar expense. Table 4.2 provides the most important factors chosen by each borrower type. Overall the most common preference for borrowers was Repayment Term (36) followed closely by Price (35). This indicates that Price and Repayment term may factor most heavily in borrower decisions. Of course, those using various sources of credit may differ on which factor they consider most important. For those who used banks or credit unions, 50.8 percent identified repayment term and 26.3 percent identified price as most important. For those who borrow from moneylenders, 41.9 percent identified price and 30.2 percent identified trust as the principal factor. This indicates that while the price seems to be an essential consideration for both groups, differences exist in how they evaluate their credit options.

Table 4.2. Most Important Factor in Credit Choice by Preferred Lender

Preferred Lender	N	Price	Approval Time	Approval Req.	Term	Trust
Bank	57	15	6	1	29	6
Pawn/Jewelry	6	2	2	1	0	1
Payday	4	0	0	1	2	1
Moneylenders	43	18	5	2	5	13
None	10					

As expected borrowers, when given a choice, preferred the lowest price. Borrowers preferred loans that have repayment terms of 30 days. Given that this is the usual repayment term for both pawn and unregulated loans, this was likely the repayment term with which many participants had the most experience. The count data also indicate that borrowers exhibited a strong preference for borrowing from a Khmer person with whom they have an existing relationship, suggesting that trust is an essential factor.

Utility Estimation

To understand how borrowers value different decision factors, I used the results of the DCE to create utility estimations for attributes and attribute levels. The utility estimations are standardized measures of value generated based on the probability of a borrower choosing one loan over another. In estimating the probabilities, I used a Hierarchal Bayesian estimation based on a multinomial logit model. The technical aspects of the models and estimation procedure are explained in Appendix D.

The initial model provides an analysis of the DCE without the stated preference or in conjoint terminology, unsegmented estimations. Table 4.3 provides a look at the within-

attribute preferences for borrowers by showing how much utility borrowers receive from each

level of an attribute, how much borrowers value one repayment term over another for example.

Table 4.3. Borrower Preferences for Different Attribute Levels

Attribute Level	Utility	SE	95% Lower CI	95% Upper CI
Price				
$4.25	38.39	5.05	27.75	49.03
$7.5	10.99	3.41	3.82	18.16
$50	-12.23	3.51	-19.62	-4.85
$75	-37.15	5.10	-47.88	-26.42
Processing Time				
Less than 1 Day	11.95	2.49	6.68	17.21
1 to 2 Days	7.56	2.90	1.45	13.67
3 to 4 Days	-7.31	2.68	-12.95	-1.66
5 to 7 Days	-12.20	2.63	-17.74	-6.65
Approval Requirement				
Proof of Employment	11.44	4.27	2.45	20.44
Bank Account	5.78	3.18	-0.91	12.47
Credit Score	1.97	4.34	-7.18	11.11
Gold	-19.19	5.93	-31.68	-6.70
Repayment Term				
30 Days	10.40	2.33	5.48	15.31
183 Days	6.61	4.34	-2.54	15.75
14 Days	1.16	2.66	-4.44	6.77
7 Days	-18.17	4.10	-26.80	-9.54
Trust				
Khmer person I already know.	26.51	3.03	20.12	32.90
An American I know.	3.12	2.44	-2.03	8.26
An American I do not know.	-13.50	2.88	-19.56	-7.43
Khmer person I do not know.	-16.13	3.29	-23.06	-9.19

As one might expect, borrowers had a strong preference for the lowest price, with the

lowest price, $4.25, and the highest price, $75, receiving the highest and lowest utility scores of

38.39 and -37.15 respectively. As the price of credit increases, these borrowers receive less

utility. Borrowers also preferred loans that they can receive more quickly although the returns

diminish at a much slower rate than with price. Processing times of less than a day and 5-7 days

received the highest (11.95) and lowest (-12.90) utility scores respectively. Levels for the attribute Approval Requirement are ordered from easiest to obtain to most difficult. Gold and Proof of Employment are the only levels that were statistically significant. In this case, borrowers received the most utility from Proof of Employment (11.44) and lowest from Gold (-19.19). As with Approval Requirement, only two levels of Repayment Term showed statistically significant utility scores. Borrowers prefer a 30-day repayment term (10.40) over a 7-day repayment term (-18.17). This aligns with information from the interviews that borrowers within the community often take loans with 30-day repayment terms with the price calculated monthly.

For the trust variable, Lender, borrowers preferred to borrow from a community member they know (26.51), then an outsider they do not know (-13.50), and lastly a community member they do not know (-16.13). A preference for borrowing from someone they know in the community indicates that borrowers put some value on trust. Given that the preference for relationship holds for members of the Khmer community but not for non-Khmer suggests that there may also be some cultural aspect in their assessment of a lender's trustworthiness.

For their preference between attributes, Table 4.4 contains Relative Importance Scores for each loan attribute measured in utiles. The results show that borrowers considered Minimum Price (24.97) and Approval Requirement (24.76) nearly equally important in credit decisions. Given that the sample is composed of approximately equal parts users of Bank Credit and those who use other sources, the results may reflect the differing preferences for the two groups.

Table 4.4. Relative Importance Scores

Attribute	Utility	S.E.	95% Lower CI	95% Upper CI
Minimum Price	24.97	(1.23)	22.45	27.49
Approval Time	14.20	(.64)	12.88	15.52
Approval Requirement	24.76	(1.01)	22.69	26.82
Repayment Term	18.83	(.86)	17.07	20.58
Lender	17.25	(.81)	15.59	18.90

To examine the differing preferences for borrowers who used different sources of credit, I introduced the borrowers' stated lender preference. The inclusion of stated preferences addresses the Independence of Irrelative Alternatives problem. In this case the problem is that if borrowers only have access to certain lenders or choose between a limited set of lenders, the inclusion of other loan options is irrelevant. Here I solve the problem by making the utility scores conditional on the participants stated preference for a type of lender.

The interviews gave me a reason to think that this may be the case. Many borrowers who said that they have used high-priced credit, said that they did not consider other types of lenders because of the approval requirement. Many felt that they would not be approved from lower-priced lenders or that the approval process for these lenders was too burdensome. This tells me that some of the options in the choice sets would have been irrelevant to them. To capture their preferred lender, borrowers were asked which type of lender they used when faced with a similar situation. The options here were Bank, Payday Lender, Pawnshop, Moneylender. The utility scores were then re-estimated conditional on their chosen type of lender.

Table 4.5 gives borrowers' preferences for different attribute levels based on their stated preference for the type of lender. The price attribute did not show any meaningful change in preference. Borrowers from all categories received the highest amount of utility which diminishes as price increases. The first notable change with the conditional utility scores is the preference for repayment term. The Bank, Pawn, and Moneylender borrowers received the most utility from a 30-day repayment term while Payday borrowers received the most utility from a 14-day repayment term. The preferences for length of payment all align with the usual repayment periods for the stated lender preference of borrowers.

Table 4.5. Stated Preference Utility Scores

Attribute	Preferred Lender			
	Bank	Pawnshop	Payday	Moneylender
Repayment Term				
7 Days	-21.38	-25.37	-5.96	-18.00
14 Days	1.36	-0.23	25.69	6.11
30 Days	11.78	12.85	7.66	11.74
183 Days	8.24	12.75	-27.39	0.16
Approval Requirement				
Gold	-46.17	56.06	-79.14	7.42
Proof of Employment	19.90	-23.50	58.52	6.80
Bank Account	10.09	-29.25	15.46	0.26
Credit Score	16.18	-3.30	5.16	-14.47
Trust				
Khmer person I know.	27.03	54.44	37.10	30.77
Khmer person I do not know.	-26.02	-6.28	-27.10	-2.72
An American I know.	8.70	-7.98	12.84	-5.78
An American I do not know.	-9.71	-40.18	-22.83	-22.27

Regarding approval requirement, borrowers seemed to prefer the approval requirement associated with the type of credit they use. Bank customers preferred Proof of Employment and Credit Score requirements. Those borrowers who used Pawnshop or Moneylenders prefer Gold. This fits with findings from the interviews, as these types of loans are almost always secured

with gold as collateral. Payday borrowers showed a strong preference (58.52 utiles) for Proof of Employment, followed by Bank Account, both of which are requirements for obtaining a payday loan.

The trust attribute showed the differences between the groups of borrowers. All borrowers received the most utility from using a lender who is from the community and with whom they also have an existing relationship. The difference appears with respect to the other levels of the trust attribute. Bank and Payday borrowers received more utility from using lenders from outside the community rather than a community member with whom they do not have an existing relationship. Those who used Pawnshop or Moneylenders preferred to use lenders from the community rather than either category of outsider. This indicates that while trust is important in both cases, the source differs between the groups of borrowers. Users of unregulated and pawn credit appeared to place more value on cultural factors (e.g., ethnic group, race, etc.) but those using banks and payday lenders placed more value on personal relationships (e.g., friend, acquaintance, etc.).

Table 4.6 contains relative importance scores for each group of borrowers. These scores illustrate how these groups of borrowers differ in the ordering of preferences for different loan attributes. For bank, pawnshop, and payday borrowers the most important loan attribute was Approval Requirement. This indicates that borrowers placed a high value on their ability to qualify for a loan. This fits with previous findings that indicate borrowers will seek high price loans if they believe that they will be turned down for less expensive options. For those borrowers who used unregulated credit, the DCE indicated that price was the most important attribute. This seems counterintuitive given that moneylender credit is costlier than some other

types of credit. It might lead some to conclude that these borrowers are incapable of evaluating their options. That, however, would be purely speculative without further information.

Table 4.6. Stated Preference Relative Importance Scores

| Attribute | Preferred Lender | | | |
	Bank	Pawnshop	Payday	Moneylender
Minimum Price	23.55	16.07	21.30	28.15
Approval Time	14.63	17.04	10.34	13.73
Approval Requirement	24.00	27.19	38.98	24.58
Repayment Term	19.01	17.12	15.34	16.82
Trust	18.81	22.59	14.03	16.72

Fortunately, I had the interviews with a subsample of borrowers to aid in the interpretation of the DCE results. During the interviews, I asked borrowers whether they considered other people or places from which to borrow. Those borrowers using moneylender credit, either considered no other lender or only considered other moneylenders. In response to a follow-up question as to why they did not consider other types of lenders, borrowers typically gave responses such as "I don't have a job", "I do not have credit", and "too much paperwork", all of which indicate that they either felt they could not qualify for other types or that the application process was too onerous. Viewing the DCE results through this lens provided some clarity to interpretation. They only chose from lenders with similar approval requirements, in this case, gold.

The fact that they are eliminating certain types of lenders based on approval requirement opens the possibility that borrowers are using something resembling a hierarchical decision

process consisting of two levels. At the first level, those using moneylender credit may be first evaluating their likelihood of approval or application requirements of less expensive sources before choosing the high-priced option. At the second level, borrowers choose between different lenders of the same type. In many cases, for this population, the second stage is deciding between different moneylenders. It appears, based on the interviews, that the DCE captured the second stage of the decision process. The relative importance score indicates that the choice in the second stage is driven by price.

After price, the DCE results indicated that Approval Requirement, with a relative importance score of 24.58, was the next most important attribute for moneylender borrowers in the second stage of the decision process. Borrowers who used moneylender credit, as well as those using pawnshops, preferred to use loans that require collateral in the form of gold. This is reflected in their utility scores within the Approval Requirement attribute which indicated that these borrowers receive the most utility from using gold as the means of securing loan approval.

More broadly the fact that Approval Requirement ranked as either first or second in importance for all groups of borrowers suggests that borrowers assess their likelihood of approval when deciding among different types of lenders. With the scenario presented to participants, one in which they need to borrow to pay rent, the consequence of having a loan request denied can be an eviction. Other scenarios facing these borrowers are often utility bills and auto repairs, both of which create a sense of urgency and the cost of loan denial like the DCE scenario. Given that both the DCE and the actual scenarios facing these borrows involve facing an expense critical to their wellbeing, financial or otherwise, it appears that borrowers apply a greater value to the likelihood of approval.

What these results imply is that borrowers place a high value on the likelihood of approval. In this sense, the borrowers are making a cost-benefit comparison. It appears that they viewed the benefit received from loan approval, in this case, avoiding eviction, to be greater than the higher price of a moneylender loan.

Simulation

Finally, to see whether the choice experiment is accurately measuring what it is intended to measure, I tested the internal validity of the DCE by using the utility and importance estimations to run market simulations. The simulation use utility scores presented above to predict which option each participant would choose given a set of options. For this simulation, I input one option for each type of loan available in the credit market; bank, payday, pawnshop, and moneylender. The market simulation then predicted which loan each borrower would choose based on the attributes of that loan. Table 4.7 shows the results of this simulation along with the percentage of borrowers who say they have borrowed from each type of lender.

Table 4.7. Market Simulation of Borrower Choices

Lender	Actual	Predicted	SE	95% Lower CI	95% Upper CI
Bank	44.2%	41.4 %	4.2 %	33.1 %	49.7 %
Moneylender	35.8%	35.1 %	4.1 %	27.1 %	43.1 %
Payday	3.3%	18.4 %	3.2 %	12.1 %	24.6 %
Pawn	5.0%	5.2 %	1.5 %	2.2 %	8.2 %

The results in Table 4.7 predicted that when faced with a scenario like the one presented in the DCE, 41.4 percent will choose Banks, 35.1 percent will choose Moneylender, 18.4 percent will choose Payday, and 5 percent will choose Pawn. The percentages of those who said

they borrowed from these sources are 44.2 for Banks, 35.8 for Moneylender, 3.3 for Payday, and 5.0 for Pawn. The 95 percent credible intervals for Bank, Unregulated, and Pawn/Jewelry all contain the self-reported use percentages. This consistency between their stated source and the predictions based on the DCE results indicates that the instrument is accurately capturing their credit preferences.

Given that the choice sets presented in the DCE instrument do not identify the type of lender, this simulation indicates that borrowers are choosing the loan that fits their needs based on the attributes of the loan. This implies that lenders used by borrowers must offer products that meet their needs given the circumstances.

The results presented in this chapter demonstrate that borrowers place value on factors other than price. Borrowers of high-priced credit seemed to put an exceptionally high value on a lender's approval requirement. Getting approved for a loan was essential to borrowers of high-priced credit. When combining the value placed on approval requirement with the answers from the interviews, it appears that borrowers are first eliminating types of lenders based on the approval requirement. It then seems that they choose between lenders of the same type based on other factors, including price. These results imply that borrowers are comparing the benefit of loan approval, avoiding eviction, to the higher price of a loan for which they know they will be approved. To these borrowers, benefits received from the loan outweigh the cost in terms of interest rate or fee. The implication is that they are not irrational but are simply willing to pay for a loan that meets their needs.

CHAPTER 5

CONCLUSIONS AND POLICY IMPLICATIONS

Findings from the interviews and the experiment seem to suggest that research neglect of demand, of how consumers view and decide on borrowing, has constrained understanding of the workings of consumer finance and, from this, design of policy interventions that might do more to help rather than obstruct lower-income families in need of credit.

The starting point of my research was a question that had not been adequately answered in the literature: Why do borrowers choose loans that, from the perspective of higher income observers, researchers, and policymakers, seem to be excessively expensive? The literature's answers to date, having to do with the borrower's absence of choice, irrationality, inability to calculate credit costs, and other like causes, may or may not be reasonable. But they are and for a very long time have been little more than premises unsubstantiated by empirical evidence. Policies based on such premises, as described at the outset, do not seem to have demonstrated positive worth, after four millennia of trying.

If nothing else my findings, albeit for a narrowly circumscribed sample population, suggest that borrowers seem to have choices, they seem to be rational and, within their economic and cultural context, they seem to assess costs and benefits reasonably well.

An overarching finding is that borrowers often view loans and loan terms differently than observers think they should. For example, they might see credit not so much as borrowing but rather as a renting of money. They seem to very seldomly intend to repay the principal within the one-month term. Instead, they plan to pay a monthly fee until they can repay the principal and seem to put value on this flexibility.

They also view other non-monetary factors to be just as if not more important than price in certain circumstances. Many of these borrowers are facing conditions in which they have a critical and urgent need for credit. These situations shape how borrowers consider the costs and benefits of loan transactions. Because such situations give these borrowers different calculations of the costs and benefits, the choice to use high-priced credit is understandable and sheds light on why demand for these loans exists.

Borrowers face circumstances in which they will incur an opportunity cost if they are unable to obtain credit. The cost of not paying rent is eviction, which not only creates an immediate need for shelter but also creates a need for more money to secure new housing. The household will need to pay a deposit and, in many cases, first and last months' rent before moving into an apartment/house. This logic extends to emergency expenses such as auto repair. Without reliable transportation, it is likely that the individual will lose their job. The resulting loss of income creates an inability to pay for rent and other necessary expenses which imposes additional costs on top of the original emergency expense.

The incurring of these additional expenses when they are unable to obtain credit leads borrowers to consider a range of factors beyond price. These non-monetary factors, including approval requirement, processing time, and trust, play a prominent role in the choice of a lender. Particularly important to these borrowers are approval requirement and processing time. Borrowers prefer loans with lower approval requirements and shorter processing times because they receive greater benefits from these types of loans. Guaranteed approval and immediate receipt of loan funds may mean maintaining shelter or employment. They are making cost-

benefit comparisons between the price of the loan and the benefit they receive from meeting their financial need.

In making these comparisons, borrowers are willing to accept tradeoffs. They are willing to accept a higher price if it means that they will be approved for a loan and receive the funds within a short time. The question then is: How much they are willing to trade?

Incorporating a discrete choice experiment reveals that while borrowers prefer a lower price, they place a high value on the other non-monetary factors. They are willing to trade a significant amount in terms of price in exchange for a loan that meets their needs in terms of these other factors. They are willing to pay a high price for a higher likelihood of approval. They are willing to pay a higher price to get a higher likelihood of approval because they judge the benefit they receive to be greater than the price.

This willingness to pay more in exchange for the preferred approval requirement and processing time does not mean that these borrowers do not consider price. Both the interviews and choice experiment show that borrowers do consider price and in fact "shop around" to find the best rate. However, they do this at a later stage in their decision process. They compare price after they have used the other non-monetary factors to choose a type of loan. Then they compare lenders of the same type based on the price. So, they appear to be using something resembling a two-stage decision process. They choose a type of loan that fits their needs, eliminating those that may reject them or process too slowly, and then they choose among loans of the same type based on price.

What these findings suggest is that researchers and other observers might benefit from a closer examination of demand for high-priced credit. Borrowers using this type of credit are not

irrational, ignorant, or ill-equipped. They are choosing a loan that best fits their needs, given the situation they face and the context in which they are choosing a loan, which is rational behavior. Perhaps rather viewing consumer lending in lower income milieu as being a problem about predatory lenders, the problem is a mismatch of supply and demand. When there is a demand for a type of loan that is not met, some person or entity will offer such a loan. Even when the loan is at a price that others may view as unfair or predatory, some borrowers will take the loan because the benefits they will receive are greater than that price.

So, I find that different loans meet different needs at different times. Borrowers will choose the loan that best fits their needs given the context in which they have a need for credit. When loans from lower cost lenders do not match the needs of borrowers, they seek alternatives that may be more expensive but is best for their specific situation.

Implications

For approximately 4,000 years those in a position to make or influence policy have taken a paternalistic approach. The goal of such policies has been to protect borrowers from "abusive" or "predatory" lenders. Focusing almost exclusively on price, policymakers have made repeated attempts to limit the amount lender can charge or ban certain types of credit altogether. Such policies have been at best ineffectual and at worst harmful.

The result of credit bans has often been a decrease in the supply of credit for those whom the ban is intended to protect. This has shown to worsen the financial situation of low-income borrowers, most recently in Georgia and North Carolina where such bans increased financial distress measured by bankruptcy filings, returned checks, and complaints against bill collectors (Desai & Elliehausen, 2016; Morgan & Strain, 2008b; Morgan, Strain, & Seblani, 2012). This

can leave borrowers reliant on other types of credit, such as overdraft credit, that is just as if not more expensive than what has been banned (Melzer & Morgan, 2014; Morgan et al., 2012).

Just as ineffective have been efforts to limit the interest rate or fee lenders charge. Dating back to the Code of Hammurabi and found in many religious texts, usury restrictions have typically led to restricted access or adaption by lenders. Recent restrictions on usury in Oregon and Arkansas have led to increasing financial distress due to a lack of credit access, resulting in the increased reliance on overdraft credit (Enumbe, Lukongo, & Jr, 2017; Zinman, 2010). A similar attempt in Ohio did not affect as high-priced lenders adapted their fee structures to work around the law.

The commonality with these credit policies is that they focus on the supply of credit while neglecting consideration of demand. Supply focused policies have failed because demand for high-priced loans exists. If high-priced loans go away, demand is unmet, and borrowers are harmed, or some enterprising lenders find a way around such restrictions. Swagler, Burton, & Lewis (1995) suggest that the reason bans of and restrictions on high-priced credit have failed is that high-priced credit fills a specific niche within the consumer finance market. Borrowers in this study, like users of payday lenders and pawnshops (Johnson & Johnson, 1998; Lawrence & Elliehausen, 2008), have a need for a specific loan product which is not available from less expensive sources. Given that this specific need exists, policymakers should take the demand side of credit transaction into consideration

One policy option that may meet both the goal of protecting borrowers and shifting them to less "harmful" types of credit is to require or encourage high-priced lenders to report credit behavior (Brooks, 2006). Doing so would provide those using high-priced credit the opportunity

to build credit histories that would give them access to lower-priced alternatives in the future. Given that low-income borrowers often do not consider lower-priced options because they deem themselves unlikely to qualify, this would address one factor that plays an essential role for borrowers.

Building a credit history, however, does not solve the problem of the mismatch between the loans that these borrowers need, and the products offered by lower cost options such as banks. One suggested solution is to provide a cheaper or even interest-free alternative (Salleh, Jaafar, & Ebrahim, 2014) for low-income borrowers that would meet their needs while being more efficient than current high-priced alternatives. This has been the most frequently attempted solution, where some charitable or non-profit organization offers small, short-term loans at little to no interest rates. These attempts date back to Mont de Piété and municipal pawnshops in Europe, which eventually spread to the United States in the form of provident loan societies. More recently there have been efforts to create a similar alternative to payday lenders by organizations like Texas Community Capital. The charitable or non-profit lender model, however, has never been successfully maintained as these organizations have struggled to be self-sustaining. If these types of efforts are to succeed, it is important to avoid repeating the errors of 500 years of benevolent loan providers that have struggled to provide more favorable loans while remaining self-sustaining.

A solution to both the problem of loan-demand mismatch and improving the financial situation of low-income borrowers may be to allow banks and credit unions to offer similar loans. The argument for allowing banks to provide such loans is that with their ability to underwrite loans more cheaply and their recourse for default through credit reporting, the loans

can be offered at lower prices (Hayashi, 2017). Borrowers not only benefit from the lower prices but are also able to build credit histories that will give them access to cheaper credit and products such as mortgages that can help them build wealth through home ownership.

None of the ideas mentioned is a panacea, but it is clear that future policy formulation must include consideration of demand for high-priced credit. While this research used a too limited sample on which to base policy, the results imply a direction for future research. Future consumer credit policy may be better served with more empirical research regarding demand for high-priced credit and the decisions of low-income borrowers.

APPENDIX A

TECHNICAL EXPLANATION OF SPATIAL MODELS

The dependent variable in the models, the number of lenders per census tract is defined as:

$$Lender_{ij} = \ Number\ of\ Lenders\ of\ type\ i\ in\ Tract\ j\ |\ \frac{Population\ of\ Tract\ j}{1000}$$

The main independent variable Ethnic Concentration is defined as:

$$EC_{ij} = \frac{\#\ of\ foreign\ born\ from\ region\ i\ in\ tract\ j}{pop\ count\ in\ tract\ j}$$

The distributions for the dependent variable representing the lender types exhibit high levels of positive skewness as well as high levels of zero values. Wanting to keep the dependent variable in a rate form rather than a count, I used Yeo-Johnson Power Transformation in an attempt to address the skewed distribution.

Both plots and Shapiro-Wilk tests show the transformation to be an insufficient method for normalizing the distribution. While the distribution of the dependent variable differed somewhat depending on the lender type and the particular study area, all followed some form of negative binomial distribution but due to the presence of high numbers of zeros, I test zero-inflated negative binomial models against the negative binomial models.

Model 1:

$$lnL(Formal_j|pop/1000) = \alpha + EC_{ij} + \ Income_j + Black_j + HISP_j + PovRate_j + ED_j + UE_j + \varepsilon$$

Model 2:

$$lnL(Bank_j|pop/1000) = \alpha + EC_{ij} + \ Income_j + Black_j + HISP_j + PovRate_j + ED_j + AFS1000_j + UE_j + \varepsilon$$

The dependent variable for each lender type contains a high number of zero values possibly indicating the need for a zero-inflated negative binomial model. I fit both the negative binomial and zero-inflated negative binomial models with an offset of 1,000 people.

I compared the fit of the negative binomial and zero-inflated negative binomial models using the Vuong Test. When using AIC and BIC corrections, there is no statistically significant evidence to support any improvement from introducing the additional equation of the zero-inflated model in any of the cases.

In addressing spatial autocorrelation present in Model 1 and Model 2, I apply a Moran' I based eigenvector spatial filter. This approach filters out spatial autocorrelation from linear and generalized models by choosing orthogonal patterns that are spatially represented in maps of spatial eigenvectors(Griffith & Peres-Neto, 2006). This is done by:

$$MWM$$

Where:

$$M = I - X(X^T X)^{-1} X^T$$

And

$$W = a\ matrix\ of\ spatial\ weights$$

Table A.1. Variable Definitions

Bank	The number of banks and credit unions in a census tract.
Regulated Lender	The combined number of banks, credit unions, payday lenders, pawnshops and auto title lenders in a census tract.
Alternative Lender	Payday, Pawn, and Auto-title lenders.
Moneylender	Any lender operating without a license.
SEA	Percentage of a census tract's population born in Southeast Asian countries.
Latin	Percentage of a census tract's population born in Latin or Central American countries.
EA	Percentage of a census tract's population born in East Asian countries.
Black	Percentage of a census tract's population reported as African American.
Hisp	Percentage of a census tract's population reported as Hispanic or Latino.
Income	Percentage of a census tract's population making less than $50,000 per year
PovRate	Poverty rate for a census tract.
Ed	Percentage of a census tract's populations having less than a bachelor's degree.
UE	Unemployment rate for a census tract.

APPENDIX B

MAPS OF IMMIGRANT COMMUNITIES
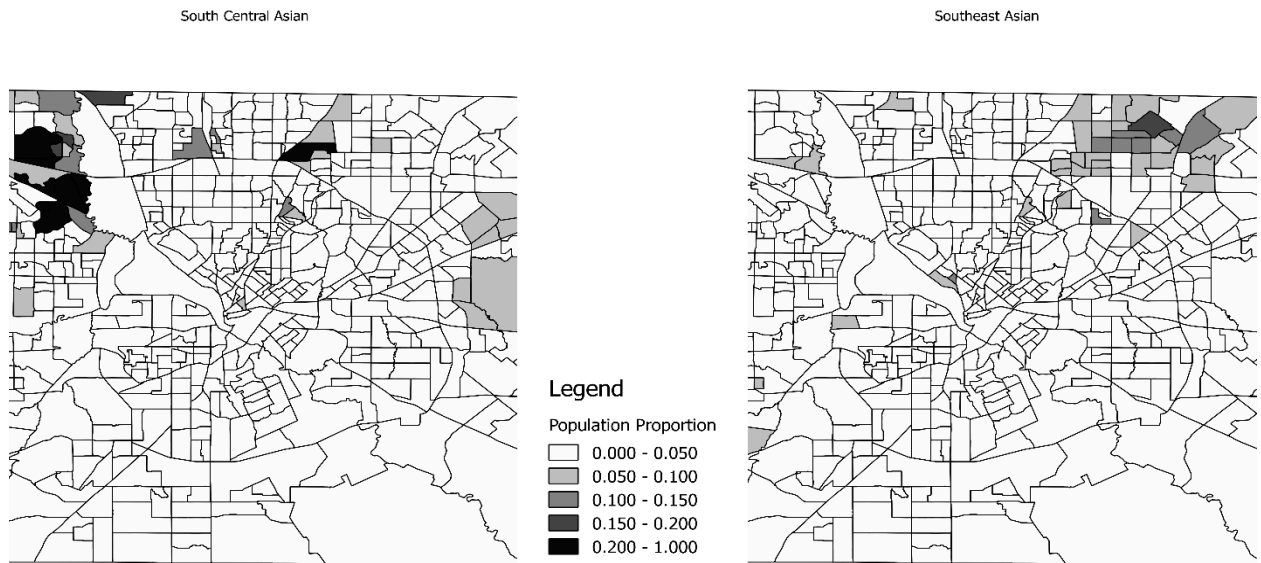
Figure B.1. Dallas County Population Concentrations

South Central Asian

Southeast Asian

Legend

Population Proportion

☐ 0.000 - 0.050
☐ 0.050 - 0.100
☐ 0.100 - 0.150
☐ 0.150 - 0.200
☐ 0.200 - 1.000
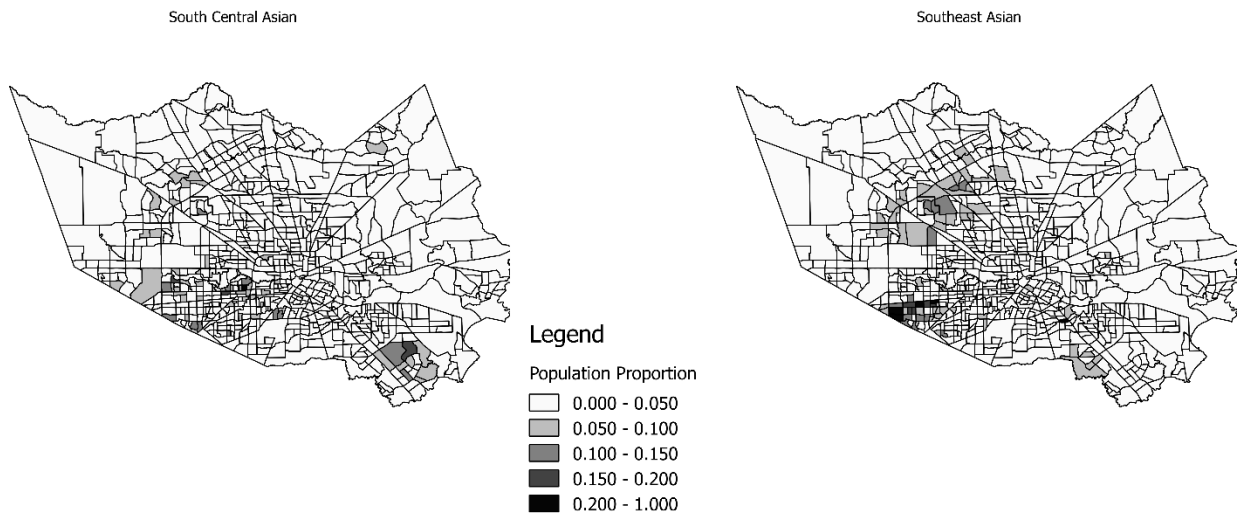
Figure B.2. Harris County Population Concentrations

South Central Asian

Souteast Asian

Legend

Population Proportion

- 0.000 - 0.050
- 0.050 - 0.100
- 0.100 - 0.150
- 0.150 - 0.200
- 0.200 - 1.000
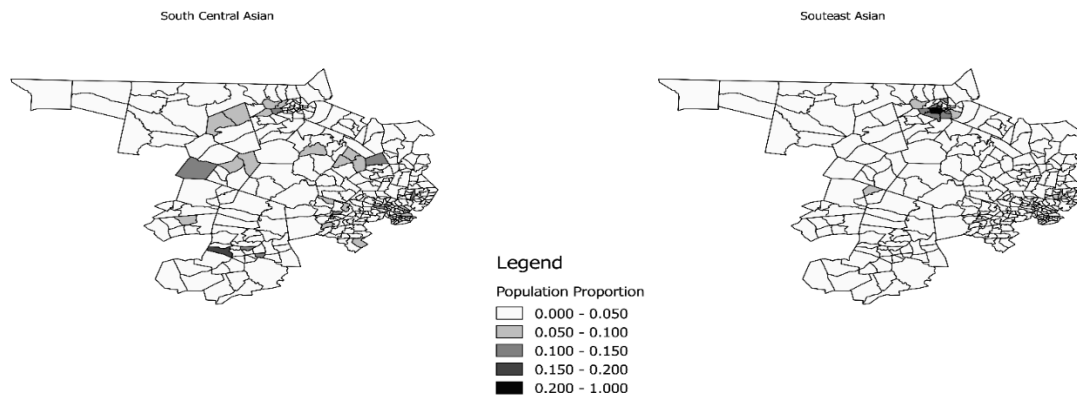
Figure B.3. Middlesex Population Concentrations

Borrower Script

Introduction: Thank you for taking the time to speak with me. Your perspective as a borrower is important in understanding how credit is used. Before we get started, I want to remind you that these interviews are confidential and will only be used for this study. Do you have any questions for me before we begin?

1) Can you remember a time recently when you borrowed money from someone who charged you some amount in exchange for lending you the money?
   a. (If yes) When did you borrow this money?
   b. (If no) *Proceed to Page 3*
2) Would you be comfortable telling me the amount that you borrowed?
   a. (If yes) How much did you borrow?
   b. (If no) *Proceed to Question 3*
3) Can you remember the purpose of the money you borrowed?
   a. (If yes) What was the purpose?
   b. (If no) *Proceed to Question 6*
4) Did you have a deadline by which you needed to get the money for this?
   a. (If yes) How much time did you have?
   b. (If no) *Proceed to Question 6*
5) Do you know what would have happened if you could not have borrowed the money before this deadline?
   a. (If yes) What would have happened?
   b. (If no) *Proceed to Question 6*

Now I'd like to talk about why you chose this lender.

6) Can you tell me if considered any other people or places as sources for this loan?
   a. (If yes) Who were these other lenders?
   b. (If no) Why did you not consider other sources?
7) With the other lender(s) that you considered, why did you decide not to borrow from them?
8) Are you willing to tell me why you chose this lender?
   a. (If yes) What was/were the reason(s) for using this lender?

      b. (If no) *Continue to Question 9*

Now I'd like to ask you about the terms of the loan.

9) If you remember, would you be comfortable how much you had to pay this person to borrow money from them?
    a. (If yes) How much did you pay?
    b. (If no) *Proceed to Question 11*
10) Was this a one-time charge or something that you were charged per week or month?
11) Do you remember how much time you had to repay the loan?
12) Would you be willing to tell me if you repaid the loan on time?
    a. (If yes) Were you able to repay the loan on time?
    b. (If no) *Proceed to Question 13*
13) Do you remember what the penalty was if the loan were not repaid on time?
    a. (If yes) What is the penalty?
    b. (If no) *Proceed to Question 14*

Now I have just a few final questions about this loan.

14) Is there a price at which you would have chosen not to borrow?
    a. (If yes) At what price would the loan be too costly?
    b. (If no) *Proceed to Question 15*
15) If you found yourself with a similar need for money would again go to this lender for a loan?
    a. (If yes) Why would you use this lender again?
    b. (If no) Why would you not use this lender again?
16) Is there another loan recently loan that you are willing to discuss?

Script for those not using moneylenders

1) Have you borrowed from another type of lender?
   a. (If Yes) What type of lender was this?
   b. (If No) End
2) Would you be comfortable telling me the amount that you borrowed?
   a. (If yes) How much did you borrow?
   b. (If no) *Proceed to Question 3*
3) Can you remember the purpose of the money you borrowed?
   a. (If yes) What was the purpose?
   b. (If no) *Proceed to Question 6*
4) Did you have a deadline by which you needed to get the money for this?
   a. (If yes) How much time did you have?
   b. (If no) *Proceed to Question 6*
5) Do you know what would have happened if you could not have borrowed the money before this deadline?
   a. (If yes) What would have happened?
   b. (If no) *Proceed to Question 6*

Now I would like to talk to you about this lender.

6) Why did you choose this lender?
7) Do you know or know of any individuals who make loans and charge those who borrow from them?
   a. (If yes) *Proceed to Question 8*
   b. (If no) *Proceed to Question 9*
8) Did you consider borrowing from this individual?
   a. (If yes) Why did you not borrow from an individual?
   b. (If no) *Proceed to Question 9*

Now I would like to ask you some questions about this loan.

9) If you remember, would you be comfortable how much you had pay to borrow this money?
   a. (If yes) How much did you pay?
   b. (If no) *Proceed to Question 11*
10) Was this a one-time charge or something that you were charged per week or month?
11) Do you remember how much time you had to repay the loan?
12) Would you be willing to tell me if you repaid the loan on time?
   a. (If yes) Were you able to repay the loan on time?
   b. (If no) *Proceed to Question 13*
13) Do you remember what the penalty was if the loan were not repaid on time?

a. (If yes) What is the penalty?
b. (If no) *Proceed to Question 14*

Now I have just a few final questions about this loan.

14) If you found yourself with a similar need for money would again go to this lender for a loan?
a. (If yes) Why would you use this lender again?
b. (If no) Why would you not use this lender again?

APPENDIX D

TECHNICAL EXPLANATION OF UTILITY ESTIMATION

The Hierarchical Bayesian model in Sawtooth's CBC/HB program consists of two levels. At the higher level, we assume that individuals' part-worths are described by a multivariate normal distribution which is characterized by a vector of means and a matrix of covariances. At the lower level the assumption is that, given an individual's part-worths, the probabilities of choosing particular alternatives are governed by a multinomial logit model (Orme, 2009).

So, $\beta_i \sim Normal(\alpha, D)$ for the upper level we have the assumption of a multivariate normal distribution of part worths noted as:

$$\beta_i \sim Normal(\alpha, D)$$

Where:

$$\beta_i = a\ vector\ of\ part\ worths\ for\ the\ individual$$

$$\alpha = a\ vector\ of\ means\ of\ distribution\ of\ the\ individuals'\ part\ worths$$

$$D$$

$$= a\ matrix\ of\ variances\ and\ covariances\ of\ the\ distribution\ of\ part\ worths\ across$$

$$individuals$$

At the individual level, choices are described by a multinomial logit model. The probability of the ith individual choosing the kth alternative in a particular task is:

$$p_k = exp(x_k'\beta_i)/\sum_j exp(x_j'\beta_i)$$

Where:

p_k

$= the\ probability\ of\ an\ individual\ choosing\ the\ kth\ concept\ in\ a\ particular\ choice\ task$

$x_j = a\ vector\ of\ values\ describing\ the\ jth\ alternative\ in\ that\ choice\ task$

The parameters ß, α, and D are estimated by an iterative process. The Lighthouse package takes a conservative approach by default, setting the elements of ß, α, and D equal to zero.

Given the initial values, each iteration consists of these three steps: First, a new α estimate is created by using the present estimates of the betas and D with the assumption that α is distributed normally with mean equal to the average of the betas and covariance matrix equal to D divided by the number of respondents. Next, a new estimate of D is drawn from the inverse Wishart Distribution using present estimates of the betas and α. Then using present estimates of α and D, the program generates new estimates of the betas with a Metropolis-Hastings Algorithm (Orme, 2009).

In each step, the software uses Gibbs Sampling which re-estimates one set of parameters (α, D or the betas) conditionally, given current values for the other two sets (Orme, 2009). This converges to the correct distributions for each of the three sets of parameters. For this study, the number of iterations for the Gibbs Sampling is set at 10,000.

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BIOGRAPHICAL SKETCH

Sean Hubbard received his BA in Government and Politics from The University of Texas at Dallas in 2003. After working on political campaigns and in the private sector he returned to pursue is doctorate in Public Policy and Political Economy. In the process of completing his PhD, Sean also earned a graduate certificate in Geographic Information Sciences. He plans to continue conducting research on decision making in low-income households while pursuing a career in academia.

CURRICULUM VITAE

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Research Interests

My research interests focus on the decision processes of those in disadvantaged urban communities as they participate in markets for credit, income, and social services. Using GIS and field research I seek to create an understanding of inequity in access and the decision processes of these households that can guide policy intended to benefit these groups.

Education

The University of Texas at Dallas, Richardson, TX   *May 2019 (Expected)*
   PhD Public Policy and Political Economy
   "High Price, High Importance: Examining Demand for High-Priced Credit"

The University of Texas at Dallas, Richardson, TX   *December 2016*
   Graduate Certificate in Geographic Information Systems

The University of Texas at Dallas, Richardson, TX   *August 2003*
   BA Government and Politics/Economics

Employment

Adjunct Instructor of Political Science – The University of North Texas – Dallas   *Present*
- PSCI 1040: American Government: Laws and Institutions
- PSCI 1050: Policy and Process
- PSCI 3100: Social Policy and Inequity

Lecturer – The University of Texas at Dallas, Richardson, TX
- EPPS 2302: Quantitative Research Methods in the Social Sciences   *Summer 2018*

Instructor – The University of Texas at Dallas, Richardson, TX
- EPPS 2302: Quantitative Research Methods in the Social Sciences   *Spring 2017*

Graduate Assistant Accreditation Assessment Office - The University of Texas at Dallas, Richardson, TX
August 1, 2017 – August 1, 2018
- Work with department heads to develop learning objectives for degree programs.
- Develop surveys for evaluating learning objectives.
- Data analysis for course and program evaluation.

Teaching Assistant - The University of Texas at Dallas, Richardson, TX
August 1, 2015 – Present
- EPPS 7370: Time Series Analysis I   *Fall 2018*
- EPPS 2301: Descriptive and Inferential Statistics for the Social Sciences   *Fall 2016*
- GOVT 2305: American National Government   *Spring 2016*
- PSC/IPE 4376: Foreign Policy and Public Opinion   *Fall 2015*

Invited Talks and Presentations

"Mobilization Still Matters: How to Run Political Campaigns and Get Out the Vote" *Faculty Speaker Series*, University of North Texas – Dallas, Dallas, TX, October 31, 2018.

Conference Presentations

"Ethnic Concentration, Formal Financial Access, and Lender Substitution" 38th Annual Fall Research Conference of the Association for Public Policy Analysis and Management (APPAM), Washington, D.C., November 2016.

"Ethnic Concentration, Formal Financial Access, and Lender Substitution" 47th Annual Conference of the Urban Affairs Association (UAA), Minneapolis, MN, April 2017.

"New Money, Old Ways: A Discrete Choice Experiment of Borrower Decisions in an Informal Credit Market" 60th Annual Conference of the Western Social Science Association (WSSA), San Antonio, TX, April 2018.

"New Money, Old Ways: A Discrete Choice Experiment of Borrower Decisions in an Informal Credit Market" 79th Annual Meeting of the Society for Applied Anthropology, Portland, Oregon, March 2019.

Publications

Hubbard, S., & Fass, S. (2019). Incorporating a discrete choice experiment into fieldwork interviews to improve understanding of household decisions to purchase "high-priced" credit. *SAGE Research Methods Cases*. http://dx.doi.org/10.4135/9781526473035

Works in Progress

"Importing Credit: An Analysis of Credit Supply in an Immigrant Community"

"Understanding Borrowers: A Discrete Choice Experiment"

"Getting to Care: A GIS Analysis of Access to County Prenatal Clinics"

Grants

Sawtooth Software Dissertation Grant, Sean Hubbard (PI), Simon Fass (Supervising Faculty), Sawtooth Software, Inc. $9,900 (In kind), September 2017 – May 2018.

Decision and Risk Management Sciences Grant (Under Review), Simon Fass (PI/Faculty Sponsor), Sean Hubbard (Co-PI). National Science Foundation Decision and Risk Management Sciences 1756995. $14,320.

Professional Memberships

- Association for Public Policy Analysis and Management (APPAM)
- Urban Affairs Association (UAA)
- Western Social Science Association (WSSA)
- Society for Applied Anthropology (SfAA)

Skills

Language - intermediate Khmer

Methods – Discrete Choice/Conjoint Analysis, Spatial Analysis, Time Series, Econometrics, Research Design, Program Evaluation

Policy Areas – Personal Finance, Social, Healthcare, Urban, Welfare

Computer Skills – R, ArcGIS, QGIS, STATA, Sawtooth Lighthouse (Conjoint Analysis)