

WHO STOLE THE AMERICAN DREAM: COLLEGE STUDENTS, SOCIAL LEARNING,
AND RISKY CREDIT CARD BEHAVIOR

By

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To my dad and mom

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I thank God, Elohim, for the strength to endure. All things are through Him. I thank my parents for their love and support. I thank my advisors for their guidance and direction.

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LIST OF DEFINITIONS AND ABBREVIATIONS

Attitudes	"A person's positive or negative evaluation of a relevant behavior and is composed of a person's salient beliefs regarding the perceived outcomes of performing a behavior" (Xiao, 2008, p 73).
Behavior intentions	How likely an individual is to perform a behavior within their volitional control (xiao, 2008).
Behaviors under violation control	Require no skills, social cooperation, require short term planning, and assume a chain, additive, or recursive structure, (Liska, 1984)
Consumer Socialization	"The process by which we learn consumption values and the knowledge and skills to be consumers," (Hoyer & Macinnis, 2009, p 397)
Differential location	Socio-economic variables (Durkin, Wolfe, and Clark, 2005, and Lee and Akers, 2004)
Expectancies	Self-efficacy and outcome expectations (Rotter, 1954)
Financially at risk (FAR)	College students are defined by the following characteristics: they have credit card balances of \$1,000 or more, are delinquent on the credit card payments by two months or more, have reached the limit on their credit cards, and only pay off their credit card balance some of the time or never (Lyons, 2004)
Pell grants	"The foundation of federal student financial aid, to which aid from other federal and nonfederal sources might be added and are reserved for the neediest students" (Federal Student Aid, 2009).
Perceived behavioral control	"The perceived difficulty level of performing the behavior, reflecting on both past experience as well as anticipated barriers," (Xiao, 2008, p 73).
Risky credit card behaviors	Having credit card balances of \$1,000 or more, being delinquent on credit card payments by two months or more, having reached the credit limit, not paying off balance is full (Lyons, 2004)
Social learning opportunities	Intentional instruction and reinforcing activities which individuals are exposed (Durkin, Wolfe, and Clark, 2005 and Gutter, Copur, and Garrison, 2009)

Social learning theory (SLT)	Looks at how society influences individuals information processing and how having external influences relates to behaviors (Akers, Krohn, Lanza-Kaduce, and Radosevich, 1979; Frayne, 1987).
Social learning variables	Differential association, differential reinforcement, and evaluative definitions (Akers et al, 1979).
Social Location	"The relationships between actors," (Evelien Otte and Ronald Rousseau, 2002, p 442)
Social Norms	Learned definitions of behaviors (Akers et al, 1979)
Social Structure	"Provides the context in which social learning variables can impact behavior" (Durkin, Wolfe, and Clark, 2005, p 258 and Bursik and Grasmick, 1996)
Subjective norms	"A person's perception of whether significant referents approve or disapprove of a behavior," (Xiao, 2008, p 73).
Theoretically defined structural variables	"Theoretically defined constructs refer to explanatory concepts found in various structural theories. These concepts are not usually measured directly but rather are measured indirectly by population, socio-demographic, or socio-economic measures (Bursik ,1988 and Sampson and Groves, 1989)
Theory of planned behavior (TPB)	The modified model of TRA that incorporated perceived behavioral control is a motivational/behavior theory designed to predict and understand human behavior based on the individual decision making process (Xiao, 2008).

Abstract of Thesis Presented to the Graduate School
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College students' management or mismanagement of credit today can impact their ability to obtain the lifestyles they desire in the future. This study looks at whether or not receiving need based financial aid is related to students' risky credit card behavior. It is anticipated that differences in the frequency of the conversations students have with their parents about money, the frequency with which students have the opportunity to observe their parents managing their money, and the perceptions students have about parents' risky credit card behavior will differ based on whether or not they receive need based aid. It was found, that there is a difference between students who receive need based aid and students who do not receive need based aid perceptions' about their parents engagement in risky credit card behavior and the difference is significantly related to the student's own risky credit card behavior.

CHAPTER 1 INTRODUCTION

Introduction

Despite college student's limited credit history and low current earnings college students are the target of aggressive marketing campaigns by credit card companies because full time students represent over sixty billion dollars in buying power, (Hay hoe, Leach, Turner, Bruin, and Lawrence, 2000). In 2006, the average traditional age undergraduate received between 25 and 50 credit card solicitations per semester (United College Marketing Services, 2006). In 2009 twenty-one percent of undergraduates had balances of between \$3,000 and \$7,000 (Sallie Mae's National Study of Usage Rates and Trends 2009).

Credit allows individuals to trade future consumption for consumption today. When managed properly it allows individuals to maintain a consistent style of living over the course of their life. When mismanaged credit adversely affects individual's short and long term consumption by lowering the consumer's credit score.

Credit scores are designed to be a measure of risk. Credit scores impact not only an individual's ability to borrow, but an individual's ability to obtain housing, employment, and the ability to obtain insurance. Payment history and the amount owed account for sixty five percent of an individual's credit score (Fair Isaac Corporation, 2005). Despite the weight placed on just these two factors "Forty percent of undergraduates said they have charged items knowing they didn't have the money to pay the bill," (Sallie Mae's National Study of Usage Rates and Trends 2009).

The mismanagement of credit by young adults has lead to the recognition of several alarming statistics and trends. Research has found that young adults who are

able to pay and make payments on their outstanding credit obligations spend on average approximately 24% of their income on debt repayment (Draut & Silva, 2004). Further, the dropout rate among college students due to debt and financial pressures is higher than the dropout rate for academic failure (United College Marketing Services, 2006).

Congress considers the potential impacts of credit card misuse by young adults to be so severe that they have passed the Credit Card Accountability, Responsibility, and Disclosure Act of 2009. The new legislation requires that individuals under 21 have a cosigner or demonstrate the ability to pay. Simply raising the minimum age to obtain a credit card or the implementation of financial restrictions is not enough. The problem is that some college students are not knowledgeable about personal financial education topics and responsibilities (Sallie Mae, 2009).

Currently only 13 states require students to take a personal finance course or for personal finance to be included in high school economics courses (Counsel for Economic Education, 2009). This means that 69% percent of American students in grades k-12 may not be formally trained within the American School system with regards to matters of personal finance. This creates a complex dynamic between what is learned through formal education and social learning with regards to financial behaviors. In areas where personal financial education is not taught in schools, a large portion of the responsibility is placed on parents. Yet parents may not have been formally trained on personal financial topics either. Similar to their children, parents may not understand how to manage their credit, budget, or savings and as a result may deliver inconsistent messages based on their own financial beliefs not facts. Due to the

potential for the inconsistent delivery of positive personal financial messages in the home, additional research on social learning process with regards to financial behaviors is needed.

Purpose

Current research has demonstrated that age, gender, race, marital status, income level, dependence on parents, and qualification for needs-based financial aid are all related to social learning opportunities (Gutter, Copur, and Garrison, 2009). The purpose of this study will be to at whether or not personal financial social learning opportunities will still differ between groups when a specific behavior, risky credit card behavior, is considered and differential location is the moderator. Differential location is the quantifiable measure of an individual's social status. Prior research has used individual indicators of differential location. This study will use a comprehensive measure looking at the relationship when multiple indicators are weighted and considered all at once.

Research Questions

- Q₁: Is there a difference in observed financial social learning opportunities between groups of college students with differential social location?
- Q₂: Is there a difference in opportunities for financial social learning conversations between groups with differential social location?
- Q₃: Is there a difference in perceived norms of risky credit card behavior between groups as defined by their differential social location?
- Q₄: What is the nature of the relationship between social learning opportunities and risky credit card behavior?
- Q₅: Does differential location moderate the relationship between social learning opportunities and risky credit card behavior?

Rationale

Prior research has established the key circles of influence that surround young people are family, school, and peers (Brendtro, 2006). Parents provide the most information and have the biggest impact on actual behavior (Pinto, Parente, & Mansfield, 2005). Parents influence financial behavior by, guiding the development of consumption patterns through verbal and/ or nonverbal communication with their children (Dursun, 1993).

Consumer socialization is, “the process by which we learn to be consumers learn consumption values and gain the knowledge/ skills for consumption,” (Hoyer and Macinnis, 2009). Research that has been conducted on the consumer socialization process shows that consumer socialization starts before children have reached four years old (Hayta, 2008). Consumer socialization is the process in which, “young people acquire the relevant skills, knowledge, and attitudes necessary to act efficiently in the market as consumers,” (Hayta, 2008). By adolescents consumer socialization skills such as time preference patterns and delay-of-gratification patterns are firmly established for life (Maital and Maital,1977). Thus lending itself to the idea, many of the financial behaviors, especially with respect to credit card use by college students are learned from their parents even before students would have been exposed to concepts in a formal educational setting.

Three key constructs have been identified as affecting consumer socialization in general: individual factors, socializing factors, and learning mechanisms (Hayta, 2008). Individual factors are defined as socioeconomic level, gender, and age/life period (Hayta, 2008). Socializing factors are defined as family members, friends, school, media/advertisements, and cultural variation (Hayta, 2008). Hayta’s (2008) model

considers the cognitive development model and social learning model as the primary learning mechanisms. Hayta (2008) posited that additional research is needed on how individual factors and socializing factors impact consumer socialization.

Significance

Gutter (2009) and his colleagues are some of the first to attempt to bridge the knowledge gap between what is known about individual differences and how the differences relate to consumer socialization. Gutter, Copur, and Garrison (2009) look at the connection between individual factors, financial social learning opportunities, and financial behaviors of college students. Gutter, Copur, and Garrison (2009) reaffirmed that social learning is related to financial socialization. It was also found that age, gender, race, marital status, income level, dependence on parents, and qualification for needs-based financial aid are all related to social learning opportunities (Gutter, Copur, and Garrison, 2009).

Due to the long term effects of inadequate consumer socialization it is important that researchers develop a better understanding of how the socialization process works and how different individual/ socializing factors affect the process. This study will expand on prior research by examining the impact of one individual factor (differential location) and one socializing factor (parents or primary care givers) on the relationship between social learning opportunities and risky credit card behavior when differential location acts as a moderator.

Assumptions

Participants

This study uses a 15 campus data set collected by Gutter, Copur, Garrison (2009). The data set was one of the first national data sets to specifically address financial

social learning opportunities. The study use a stratified sampling to first select the states and then large state universities for participation. Participants had to be currently enrolled and over 18. There were about 16,876 participants. This study similar to Gutter, Copur, and Garrison eliminated home schooled and international students. Home school students were excluded because of the fact that in some cases the parents are the teachers. Through participating in the educational process these parents may be exposed to or teach personal finance to their children resulting in these parents being inadvertently more self conscience of the financial messages they send to their children. The responses for international students were excluded because different countries may have different norms about financial behaviors and financial education.

Parents

This study assumes that parents/guardians all have the same impact on differential association. Differential associations are conceptualized as the time, frequency, and duration of interactions between individuals. The time, frequency, and duration that parents/guardians spend with their children can be influenced by a number of things such as the amount of hours that they work, whether they are the biological parent or the guardian, the nature of the relationship between the parent and the child, or even what age was the child when he/she went to college.

Limitations

Validity and Reliability

Participants for this study were only selected from large public universities. There could statistical differences between students that attend smaller colleges, historically black colleges, or private universities when compared to those who attend large public

universities. Further, there could be difference between this group, college students, and those that do not attend college at all.

Survey Administration

Surveys were administered via email. Bias could be a problem as certain types of students are more likely to participate in online surveys than others. Additionally there was an incentive offered to participants. Every 1000th person to complete a survey would receive a \$100.00 gift card.

CHAPTER 2 LITERATURE REVIEW

Financial Knowledge and Access

“For everyone who has will be given more, and he will have abundance. Whoever does not have, even what he has will be taken from him” (Matthew 25:29 New King James Version). This phenomenon is known as the “Matthew Effect”. The parable describes the value of positive consumer socialization and the potential consequence of insufficient consumer socialization. The servant with the smallest amount of financial resources did not have the necessary knowledge to best manage the money which he was entrusted with. As a result of his lacking financial ability, the master took the money from the least knowledgeable servant and gave it to the servant with the most financial ability.

The privilege or disadvantage of financial access described in the “Mathew Effect” still holds true today. Those with financial capabilities and knowledge experience financial gains and those without tend to be plagued by continual financial struggles. Modern day examples of this are illustrated through the existence of alternative financial institutions such as payday lenders, pawn shops, rent to own establishments, and high interest credit cards. Consumers who use the services provided by alternative financial institutions are often charged higher interest and fees than consumers who use traditional financial institutions; hence certain consumers are at a disadvantage because of their lack of financial knowledge.

Financial theorists use behavior theories such as the theory of planned behavior (TPB) and social learning theory (SLT) to understand the determinants of future financial behaviors such as risky credit card behavior. Financial theorists who prescribe

to the TPB model argue that consumers engage in risky credit card behavior because of personal choices that they believe are most beneficial to them. Social learning theory incorporates some aspects of TPB, but takes into account the role of the social learning process as it influences planned behavior.

“The average undergrad carries \$3,173 in credit card debt,” in some cases, in addition to student loan debt (Sallie Mae, 2009). Without a firm understanding of interest and fees even a small credit card balance can add up quickly, creating a modern day “Mathew Effect”. Having a credit card allows some students to build credit and to earn greater amounts of interest on the money they have through use of float time (the time from when you make a purchase on a credit card to the time when interest starts accruing). Less knowledgeable students may not have the knowledge or capabilities to use credit as advantageously as their more knowledge/capable counterparts. Using a social lens which incorporates parts of theory of planned behavior and social learning theory allows both the role of individual decision making and social influences to be accounted for as a better understanding of the relationship between college students and risky credit card behavior is sought.

Theory of Planned Behavior

The theory of planned behavior (TPB) is a motivational/behavior theory designed to predict and understand human behavior based on the individual decision making process (Xiao, 2008). TPB is derived from Ajzen and Fishbien’s (1980) Theory of Reasoned Action (TRA). TPB has been applied in numerous studies on consumer decision making (Rutherford & DeVaney, 2009; Xiao, 2008).

TPB contains five constructs, the first five (attitude, subjective norms, intentions, perceived behavior control, and actual behavioral control) which influence the sixth

construct, behavior (Figure 1-1). The construct of attitude is used to reference an individual's attitude towards engaging in a behavior or a, "person's positive or negative evaluation of a relevant behavior and is composed of a person's salient beliefs regarding the perceived outcomes of performing a behavior" (Xiao, 2008, p 73). Hence students who engage in risky credit card behavior are evaluating negative behaviors such as: having credit card balances of \$1,000 or more, being delinquent on credit card payments by two months or more, having reached the credit limit, and only paying off credit balances some of the time as maybe not idea, but acceptable behavior. Another component of TPB is subjective norms. "Subjective norms refer to a person's perception of whether significant referents approve or disapprove of a behavior," (Xiao, 2008, p 73). Based on this definition, students who engage in risky credit card behavior would also have parents or other significant referents whom approve of risky credit card behavior or at least do not strongly disapprove of the behavior.

It becomes apparent that only looking at risky credit card behavior from the TPB lens may not be the best fit once one begins to examine how the remaining constructs: behavior intentions, actual behavior control, and perceived behavioral control are conceptualized within the TPB framework. Behavior intentions pertain to how likely an individual is to perform a behavior within their volitional control (Xiao, 2008). Behaviors within an individual's volitional control are those that require little skills, social cooperation, short-term planning, and assume a chain, additive, or recursive structure (Liska, 1984). In the broad sense, risky credit card spending may fall into the category of behavior intentions that are within an individual's volitional control. However, for some individuals, the skills necessary to avoid risky credit card behavior such as:

individual financial planning, loans/financing, net present and net future value, and simple/compound interest are lacking. The number and specificity of skills needed, as well as possible long-term planning involved to avoid risky credit card behavior is likely to be beyond the volitional control of college students who are financially at-risk (FAR). FAR students may lack the social learning opportunities to obtain necessary skills and, as a result, exercise limited to no volitional control over their risky credit card behaviors. This study will examine whether or not there is a difference between the social learning opportunities of FAR college students and students that are not financially at risk (NFAR).

The fifth construct, actual behavior control in TPB is conceptualized similar to social structure in social learning theory (SLT). Social structural variables are treated as mediators which have the potential to explain how or why social factors may influence the remainder of the social learning process. Both variables take into account factors that may influence an individual's control over his or her behaviors. The main difference between the two constructs is that actual behavioral control in TPB is often conceptualized as factors that directly influence perceived behavior control or actual control over behaviors. In TPB actual behavior control serves a moderator between perceived behavioral control and behavior. For example, when looking through the TPB lens financial resources could influence risky credit card behaviors through influencing students' perceived alternative options (perceived behavioral control) or through influencing whether or not students make payments (actual behaviors). Hence the variables associated with actual behavioral control are treated as background variables in TPB (Liska, 1984) as appose to potential predictor variables in SLT.

Another addition to the basic TPB is the construct of perceived behavioral control, added by Ajzen (1991). Perceived behavioral control acts as a precursor to behavior, similar to the actions of the constructs of attitude and subjective norms. "Perceived behavioral control describes the perceived difficulty level of performing the behavior, reflecting on both past experience as well as anticipated barriers" (Xiao, 2008, p 73). Perceived behavioral control is also a term used in social learning theory (SLT); however, it is conceptualized differently. A key difference is that perceived behavioral in TPB only applies to behaviors within an individual's volitional control. Perceived behavioral control in SLT attempts to capture one's general beliefs about ability and expectancies toward all behaviors, regardless of whether or not the behavior has been carried out. Generally the way perceived behavioral control is conceptualized by Bandura (1997) and applied within the social learning framework is considered to be a better predictor of behavior because it incorporates the key concepts of TPB and considers the potential relationship among them not specified/acknowledge in TPB (Xiao, 2008). When looking specifically at financial behaviors using the social learning framework, the way Bandura (1987) conceptualized perceived behavioral control is useful because it takes into account behaviors which a person may feel confident about performing, but may not currently have the means to accomplish.

History of Learning Theory

Social learning theory looks at how external or social influences impact individuals' decision making process and, in turn, behaviors (Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979; Frayne, 1987). The ground work for social learning theory was founded in the field of psychology. Edward Tolman set the frame work for the theory with his experiments on rats in the early 1930's. Tolman (1966) found, "Specific

acts tend to be learned or not learned according to the 'goodness' or 'badness' of the consequences (p. 69)."

In 1941 Miller and Dollard expanded on Tolman's idea and coined the concept of Social Learning. Millard and Dollard conducted experiments on the learning process of children and also analyzed crowd or group behavior. Their research supported that learning takes place according to certain principles (Miller & Dollard, 1941).

Furthermore the learning process is strengthened through imitation (Millard & Dollard, 1941).

Julian Rotter, also a psychologist, made three important contributions to social learning theory. Rotter: 1) identified how people develop "expectancies" or perceived norms and outcome expectations; 2) developed a scale to measure perceived norms; and 3) introduced the concept of "self". Rotter (1954) found support for his hypotheses that: 1) people who experienced failure during their first attempt had a high expectancy for punishment or failure and avoided similar situations in the future; and 2) the opposite was true for people who experienced success (Rotter, 1954). Albert Bandura is considered the founder of modern social learning theory. Through researching aggression in adolescents, Bandura found:

Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action (Bandura, 1977, p. 22).

Bandura appears to have incorporated the general principles of Southerland's (1974) concept of differential associations (i.e., learning that occurs through interacting with others) with the prior contributions of other theorists, including that of Tolman, Miller and Dollard, and Rotter, into one cohesive theory, to build modern social learning theory.

Akers (1998) added to Bandura's social learning model by recognizing the role of social structure as mediator in the social learning process. These variables are thought to potentially explain how or why social factors may influence the remainder of the social learning process. This differs from TPB in which social structural variables are incorporated in to the construct actual behavioral control, with other variables thought to directly influence volitional control. Social structural variables include differential location, differential social organization, theoretically defined structural variables, and differential social location variables (Akers, R.L, 1998). Differential location is commonly defined as socio-economic status which is commonly indicated by income, education, and employment. Differential social organization describes socio-demographic variables such as age structure or population density. Theoretically defined structural variables are other theoretical approaches to examining the behavior within the model such as TPB. The fourth variable, differential social location is comprised of the individual's social network.

Social structure is thought to influence financial behaviors through differences that exist between groups (Garrison & Gutter, 2008). There is a significant amount of support for the idea that social structure has an influence on social learning

opportunities (SLO): conversations, observations, and perceived norms. SLO are thought to influence behavior intentions and in turn directly influence behavior.

The revised model of SLT has three constructs: social structure, social learning, and perceived norms. These three constructs are expected to lead to the continuation and expiration of behaviors. Clark, Durkin, and Wolfe tested Akers (1998) revised model of social learning in a study of college students and the risky behavior of binge drinking (2005). Clark and colleagues' (2005) research showed promise with regards to explaining how social demographic variables are related to binge drinking. However, their sample size was small and the theory has not been tested specifically with regards to college students' risky financial behaviors. This study will expand on previous research by looking specifically at the relationship between social learning opportunities and risky credit card behavior of college students with differential location as a moderating variable.

Social Learning, Perceived Norms, and Financial Behaviors

Perceived norms or outcome expectations are, "expectations about environmental cues and expectations about the consequences of one's own actions," (Rosenstock, Strecher, & Becker, 1988, p.176). In a study on impulsive purchasing, Luo compared the impact of peer versus parent influence on college students' purchasing patterns (2005). Luo found that parents were most influential with regards to positive financial decision making when it comes to impulsive buying; however, this finding was dependent on within-group cohesion. "Group cohesiveness refers to how attractive a group is perceived to be by its members," (c.f., Forsyth, 2000; Turner, Pratkanis, Probasco, & Leve, 1992; Luo, 2005). Hence parental influence may vary based on the nature of the relationship that parents have with their children. Although parents may

not be the only source of socialization, they do provide more financial information than peers, school, or the media (Luo, 2005). Pinto and Mansfield (2006) were able to replicate prior findings with regards to the significance of the role parents have in financial socialization in general, but were not able to replicate the significance of parents with regards to impulsive buying. Thus, demonstrating parents may influence one area of the financial socialization process, but not the behavior.

More recent research shows a relationship between financial socialization and financial behaviors, (Gutter, Copur, & Garrison, 2009, p. 83; Gutter, Copur, & Garrison, 2010; Garrison & Gutter, 2010). Further, this research was able to show that perceived norms impact college students' financial decision making in general as well as influence credit card behaviors (Gutter & Garrison, 2008), thus demonstrating financial decision-making is influenced by others through social learning conversations/social learning observations and influenced by an individual's assessment of the perceived norms of others. Perceived norms reflect individual assessments of behaviors as well as perceptions of one's social environments assessments of the same behaviors. Gutter, and Garrison (2008) combined perceived norms, social learning conversations, and social learning observations into a measure of social learning opportunities (SLO). Social learning opportunities were shown to be related to financial behaviors (Garrison & Gutter 2010). This study will look at the relationship between social learning opportunities (perceived norms, social learning conversation, and social learning observations) and risky credit card behavior when differential location is serving as a moderating variable.

By looking at financial behaviors using a broader theoretical approach such as SLT provides a more complete picture of influences on financial decision-making and financial behaviors. SLT, combined with similar constructs in TPB, has strong potential for conceptualizing and empirically examining the relationship between social structure, subjective norms, behavior intention, and actual behaviors in an attempt to describe how knowledge is transmitted and the factors that encourage or inhibit the transmission process (Bandura, 1997; Contu & Willmott, 2003).

Social Learning Opportunities and Differential Location

Prior research has looked at the effect of social structure on financial behaviors by examining the variable differential social organization. These studies have found that financial behaviors differ based on educational level, gender, and race (Lusardi & Mitchell, 2007; Yao, Gutter, & Hanna, 2005; Gutter & Fontes, 2006). Additional research has found that financial differences between these groups may be related to financial social learning opportunities (Gutter, Copur, & Garrison, 2010).

It is necessary to conduct research similar to what has been done on gender and race for socio economic status. The variable differential location is the quantifiable measure of an individual's social status (Durkin, Wolfe, & Clark, 2005; Gutter, Copur, & Garrison, 2009). The receipt of Pell grants is a unique indicator of differential location for college students. Pell grants are "the foundation of federal student financial aid, to which aid from other federal and nonfederal sources might be added" (Federal Student Aid, 2009). Pell grants serve as a unique indicator of a student's and his/her family's differential location because they are based on a quantifiable measure of socioeconomic status, expected family contribution (EFC).

EFC is a good indicator of socioeconomic status and family financial strength because it serves as a standardizing measure of financial resource availability, functioning similar to GPA or SAT and academic standing (Free Application for Federal Student Aid, N.D.). EFC takes in account: student status, dependence on/independence from parents, dependents, receipt of other types of assistance, other debt, income, assets, and other immediate family members in school. Once the student's EFC has been calculated a table is use to relate EFC to cost of attendance and determine the financial aid award amount (See appendix A). Due to the mathematics behind how EFC is calculated and who qualifies for Pell Grant the receipt or non-receipt of the Pell Grant serves as an indicator of a family's financial resources. Prior research has demonstrated that differences between groups can indicate differences in financial social learning opportunities (Gutter, Copur, & Garrison, 2010). This study will explore whether differential location will moderate the relationship between social learning opportunities and risky credit card behavior.

Social Learning of Risky Credit Card Behavior

College students represent over sixty billion dollars in buying power (Punch, 1991). Banks are interested in college students because college students are likely to use their available credit and become long time customers (Warwick & Mansfield, 2000, & Sallie Mae, 2009). Due to grants, loans, and other types of educational funding sources, college students' gain access to a variety of traditional and alternative financial products, but may not be familiar with the rules for advantageous use. While the Credit Card Accountability and Responsibility Disclosure Act of 2009 (CARD) will help to defer the age at which consumers acquire their first credit cards, young adults will continue to be heavily targeted by financial institutions' marketing campaigns.

Whereas CARD can make it more difficult for students to obtain their first credit card, students can still gain access through the help of a cosigner or by demonstrating an ability to pay. This means that there is still the opportunity for some students to misuse credit. The US Public Interest Research Groups (PIRG) reported twenty-five percent of the 1,584 college students surveyed paid a late fee and fifteen percent have paid an over the limit fee at least once (U.S. PIRG, 2008). PIRG's findings indicate some students' do engage in risky credit card behaviors.

Risky credit card behaviors are defined by the following characteristics: having credit card balances of \$1,000 or more; being delinquent on credit card payments by two months or more; having reached the credit limit; and/or only paying off credit balances some of the time or never (Lyons, 2004). These same factors are used to determine if a student is financially at risk (FAR). In a study where FAR students are compared to non-financially at-risk (NFAR) students, FAR students were found to carry higher credit balances and have higher student loan balances (Pinto & Mansfield, 2006). Factors that are likely to contribute to whether a student is financially at risk include: gender; ethnicity; being a graduate student; being financially independent; receiving financial assistance; owing other debt; and the manner in which credit cards are acquired (Lyons, 2004). For example, not having the financial knowledge or capabilities necessary to open a bank account cost the average American \$86.83 a month and more than \$40,000 over their life time on check cashing costs (Pew Charitable Trust, 2009; President Bill Clinton and California Gov. Arnold Schwarzenegger, 2008). Not understanding credit is even riskier because credit involves fees and compounding interest.

At the collegiate level research continues to show, that parents give out more financial information with regards to credit cards than school, the media, or the students' peers (Pinto, Parent, & Mansfields', 2005). The amount of financial (credit card) information provided by parents to students is related to lower credit card balances (Pinto, Parent, & Mansfields', 2005). Research shows that college students who have credit cards before college are more responsible when it comes to credit usage (Munro & Hirt, 1998). This finding illustrates the relationship between financial socialization opportunities and college students' credit card usage/behaviors. Further, it has been demonstrated that even imagined interactions by the college students with their parents about credit card usage/behaviors are, "significant in distinguishing the number of credit cards a student holds," (Hayhoe, Leach, Allen, & Edwards, 2005). These findings reflect the significance of having access to positive financial social learning opportunities such as being able to engage in social learning conversations or observations. Financial socialization provided by parents early on and the opportunity for students to model parents' behaviors provide social learning opportunities that can potentially outweigh negative messages provided by other socialization agents.

Summary

Prior research has shown that social learning theory can be used to examine financial behaviors and financial decision making. Further, differences between groups when analyzing social structural variables have been shown to be related to differences in financial social learning opportunities and perceived norms (Garrison & Gutter, 2010). Similar research is needed on the social structural variable differential location to answer the following questions:

Q₁: Is there a difference in observed financial social learning opportunities between groups of college students with differential social location?

Q₂: Is there a difference in opportunities for financial social learning conversations between groups with differential social location?

Q₃: Is there a difference in perceived norms of risky credit card behavior between groups as defined by their differential social location?

Q₄: What is the nature of the relationship between social learning opportunities and risky credit card behavior?

Q₅: Does differential location moderate the relationship between social learning opportunities and risky credit card behavior?

This study will expand on prior research by looking at whether or not personal financial social learning opportunities will still differ between groups when a specific behavior, risky credit card behavior, is considered and differential location is the moderator. In order to examine this relationship in detail the following hypothesis will be tested.

Ha₁: Observed financial social learning opportunities will differ between students based on their differential location.

Ha₂: Opportunities to engage in financial social learning conversations will differ between students based on their differential location.

Ha₃: Perceived norms of parents' RCB will differ based on the family's differential location.

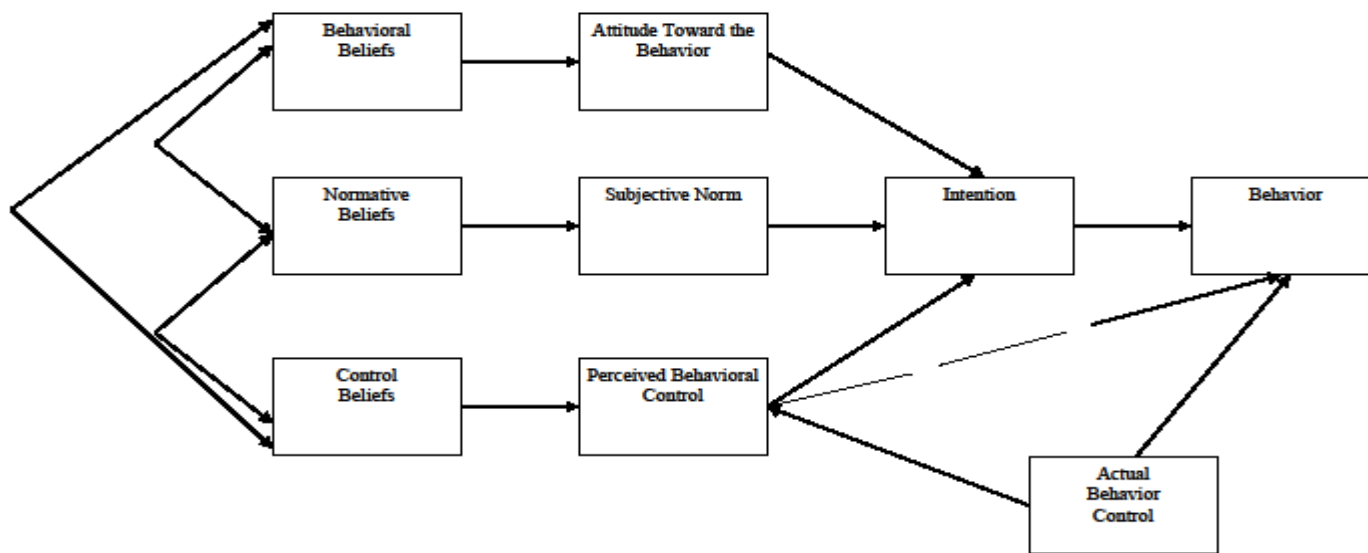
Ha₄: Differential location will be positively related to risky credit card behavior.

Ha₅: Differential location will serve as a moderator between the social learning opportunities and risky credit card behavior.

Understanding what, if any, differences social structural variables mediate is a step towards understanding differences in social learning opportunities and their relationship to financial behavior. Having a grasp of how these differences vary among groups of individuals has implications for public policy, financial education, and

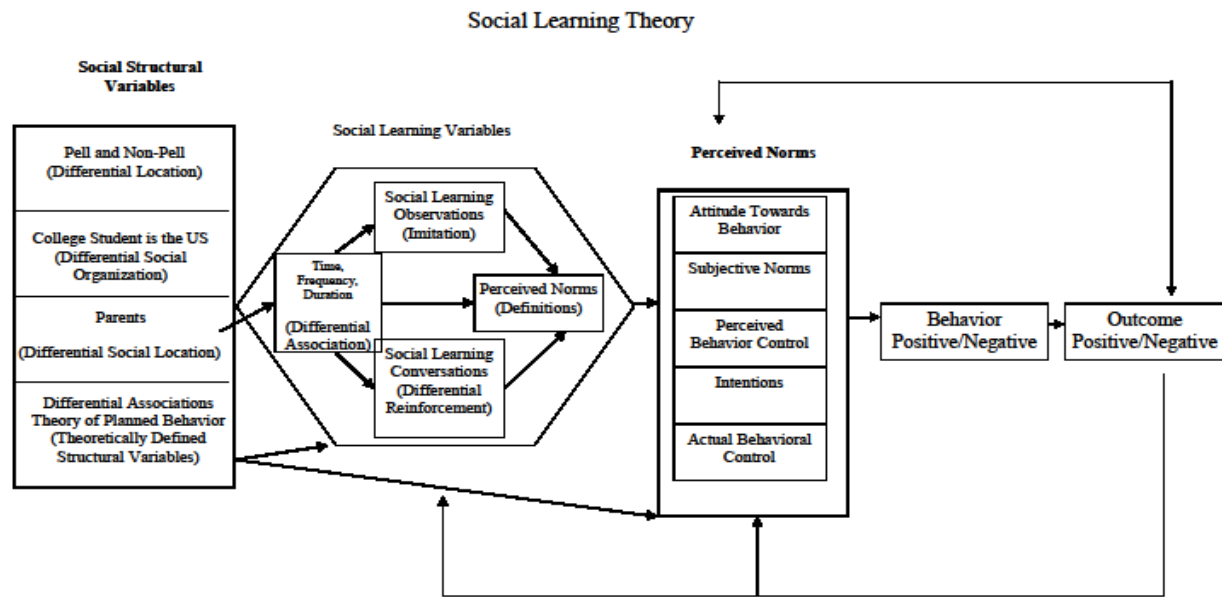
individuals' financial security. For example, if social learning opportunities continue to be found to be related to financial behaviors policies may need to focus on providing more positive social learning opportunities for individuals or certain groups of individuals, as oppose oppose to just restricting the behavior of financial institutions.

For now, financial socialization is seen as primarily the responsibility of parents. By separating the components of the social learning opportunities measure (social learning conversations, social learning observations, and perceived norms) it allows for each component's relationship to risky credit card behavior to be seen. This will allow for future financial education materials and messages to be developed and presented in order to help parents provide the most meaningful financial social learning opportunities for their children.



Ajzen, I. (1991).

Figure 2-1. Model of theory of planned behavior



(Akers, 1998; Becker, Marshall, Rosenstock, 1998; Veysey & Messner, 1999)

Figure 2-2. Model of social learning theory

CHAPTER 3 METHODS

Sampling and Data Collection

This study uses a 15 campus, data set of college students that attend large public universities collected by Gutter, Copur, and Garrison (2009). The original data was collected as part of a study that looked at the impact of financial education on financial behaviors. Participants in the original study were selected using stratified random sampling. First the states were selected for participation and then large state universities from selected states participated. Participants for the study had to be currently enrolled in the selected universities and over 18 years of age.

The study was conducted using online surveys. Students' email address were obtained from participating universities. The student who completed every one thousandth survey received a \$100 gift card. There were 16,876 participants which was a 10.22% response rate from college students who were invited to participate in the study (Gutter, Copur, & Garrison, 2009; Garrison & Gutter, 2010).

In order to use the data collected by Gutter and Garrison (2009). I filed IRB 02 to request permission to use their data. This study uses a cross-sectional research design. Groups are based on the independent variable of differential location. Differential location is indicated by the students' need based aid status (whether they receive need based aid /Pell grants or they do not receive need based aid or Pell grants).

While the original sample consisted of 16,876 participants; students that went to high school in other countries were excluded from the final sample, as cultural factors could impact family based social learning opportunities. After excluding students from other countries the sample included 12,658 students. Only students who responded to

the question, "What type(s) of financial, if any, are you currently receiving," were included in the final sample. This sample consisted of 12,658 student of these student 2,830 receive needs based aid and 9,828 do not. The sample was composed of 34.1% males and 65.9% females. Of the students sampled 82.5% of white (non-Hispanics), 4.5% African Americans, 5.8% Hispanics, and 7.3% of students from other ethnicities. The average age of the students sampled was 21.31 years.

Independent Variables

Descriptive Statistics

Sex, age, and race were included in the analysis to look at differences that exist between Pell and Non-Pell recipient students. Students were asked, "What sex are you?" Responses were either male or female. Students were asked, "What is your current age?" The response was open ended. Students were asked, "Which of the following best describes your race/ethnicity?" Students were asked to select from one of the following categories, White, African-American, Hispanic, Asian-American, Asian, Native American, and other (please specify).

Differential Location

Differential location is a measure of socioeconomic status (Durkin, Wolfe, and Clark, 2005, and Lee and Akers, 2004). Receiving a Pell grant is used as an indicator of differential location in this study because being a Pell grant recipient is based off of a formula that takes several indicators of socioeconomic status into consideration. To find out students' Pell status students were asked, "What type(s) of financial aid, if any, are you currently receiving? (Check all that apply.)" Students were asked to select from seven categories: "None", "Federal Students Loans (i.e. Stafford)", "Federal work-study", "Need-based grants (i.e. Pell)", "scholarships", "tuition wavier", and "other". For

the purpose of this study only the students' need-based grants status (i.e. Pell status) is used as an indicator of differential location. As Federal aid is awarded based on expected family contribution. Students who checked needs-based grants (i.e., Pell) are considered Pell students. Students who did not check Pell, but checked any other type of financial aid or none are classified as non Pell students.

Pell status served as an indicator of differential location because the Pell Grant is awarded based on expected family contribution (EFC). EFC serves as a standardizing measure of financial resource availability (Free Application for Federal Student Aid, N.D._a) and is calculated by a formula and charted to determine the students Pell grant award amount. The Pell is the bases of all financial aid; hence students that do not qualify for Pell Grants are considered to have families who can contribute more to the students' education or have greater family financial strength (Free Application for Federal Student Aid, N.D._b).

Social Learning Opportunities (Observed)

Social learning opportunities are based on observations, conversations, and perceived norms of financial opportunities. Students were asked: "How often have you observed your parents/caregivers involved in the following during the past five years?" Students were asked to respond to seven items that asked about specific positive financial behaviors. These behaviors included: "avoiding over spending", "checking credit reports", "saving/investing", "banking", "maintaining health insurance", "maintain auto insurance", and "maintain renters insurance". Responses ranged from 1 (never) to 5 (often), and included a "don't know" option. Scores on the seven items were coded so that the range of scores was from 7 to 35. Based on the scale used, lower scores

indicate less frequent observed social learning opportunities or the ability to recall observed social learning opportunities less frequently.

The observed social learning opportunities measure used in this study is a portion of the scale used in Gutter, Copur, and Garrison, 2009. This measure breaks the components of social learning into separate areas: social learning conversations, social learning observations, and perceived norms (Akers, 1998 & Veysey & Messner, 1999). In order to test the correlation of measures used in partial scales a reliability analysis should be run. The analysis produces a statistic known as Cronbach's alpha. The higher the alpha value the more reliable the scale. The observed social learning opportunities scale used in this study has a Cronbach alpha of .811. This indicates that when just measures of social learning observations are taken from Gutter, Copur, and Garrison's (2009) social learning opportunities scale the revised scale is internally consistent.

Social Learning Opportunities (Conversations)

Students were asked: "How often have you talked with your parents/caregivers about the following during the past five years?" Students were asked to respond to eight items that asked about specific positive financial behaviors. These behaviors included: "avoiding over spending", "checking credit report", "saving/investing", "banking", "maintaining health insurance", "maintain auto insurance", and "maintain renters insurance". Responses ranged from 1 (never) to 5 (often), and included a "don't know" option. Scores on the seven items were added so that the range of scores was between 7 and 35. Based on the scale used, lower scores indicate less frequent observed social learning opportunities or the ability to recall observed social learning opportunities less frequently.

The social learning conversations measure used in this study similar to the social learning observations measure is a portion of the scale used in Gutter, Copur, and Garrison, 2009. The observed social learning opportunities scale has a cronbach alpha of .808. This indicates that when just measures of social leaning observations are taken from Gutter, Copur, and Garrison's (2009) social learning opportunities scale the revised scale is internally consistent.

Perceived Norms

Students we asked, "How often do you think your parents do each of the following (Only choose N/A if your parents have no credit cards)?" Students were asked to respond to six items that asked about specific risky credit card behaviors. These behaviors included: using your credit card for everyday expenses, maxing out credit cards, making late payments, going over the credit limit, not paying down balances monthly, and over drafting. Responses ranged from 1(Always) to 5 (Never), and included a "N/A" option if parents did not have a credit card. Students who marked "N/A" option were excluded from the sample. Responses ranged from 1 (Always) to 5 (Never), and included a "N/A" option if parents did not have a credit card. Scores on the six items were coded so that the ranges of scores were from 6 to 30. Higher scores indicate norms that are less favorable to RCB.

The observed perceived norms measure used in this study is also a portion of the scale used in Gutter, Copur, and Garrison, 2009. The perceived norms scale has a cronbach alpha of .812. This indicates that when just measures of perceived norms are combined into a scale the scale is internally consistent.

Dependent Variables

Risky Credit Card Behavior

For the purpose of this study only the items that pertained specifically to risky credit card behavior were included. These behaviors included: maxing out credit cards, making late payments, not paying your balance in full, and having credit a credit card balance of \$1,000.00 or more.

Students were asked: "To think about your own typical behaviors. Indicate how many time you did each of the following during the last year". Only choose "N/A" if you do not have credit cards in your own name. Students that do not have any credit cards in their name were excluded from the sample. Students were then asked to respond to three items that asked about specific financial behaviors (maxed out their credit, been delinquent, and do not pay off balance). Responses ranged from 0(never) to 3 (often), and included a "don't know" option (ranked as 4). Each cause behavior was recorded (0=0, 1-3=1, 4=0, and system missing= system missing). Students were also asked "Think about all the credit cards you have. What is the total amount you currently owe on all of your credit cards?" Credit card balance of \$1000 or more considered as RCB. The RCB variable was recorded on an ordinal scale (0=0, 1-3=1, and system missing= system missing) to (0=no, 1=yes, and system missing= system missing) to a binary variable. Students either engage in risky credit behavior or they do not. Students who scored 1 or more are counted as engaging in risky credit card behavior. For the purpose of this study students had to receive a score of 0 to be considered not engaging in risky credit card behavior.

The additional credit card balance of \$1,000 or more behavior was added to the already existing measurement based on prior research (Lyons, 2004). Lyons'

“measures of financial risk were constructed based on previous research which has consistently identified credit misuse and/or mismanagement according to four characteristics,” (Lyons, 2004, p 61). The characteristics include having credit card balances of \$1,000 or more, being delinquent on credit card payments by two or more months, having reached the limit on credit cards, and only paying off their credit card balance some of the time or never (Lyons, 2004). Lyons’ looked at each of the risky credit card behaviors independently. For the purpose of this study the four characterizes were combined into a binary variable where students were looked as engaging in risky credit card behavior or not because considering each of the behaviors cumulatively was not shown as significant (Appendix C). The cronbach alpha for the Risky Credit Card Behavior (RCB) scale used in this study is .806.

Analysis

Initially chi-squared analysis will be run to look for significant differences between the Pell and Non-Pell groups on the variables sex, age, and race. This will be followed by a preliminary exploration of the research questions. This will include simple bivariate comparisons employing independent sample *t*-test examine whether or not the financial social learning opportunities and perceived norms of the sample, differed by differential location (Hypotheses 1, 2, 3).

Ha₁: Observed financial social learning opportunities will differ between students based on their differential location.

Ha₂: Opportunities to engage in financial social learning conversations will differ between students based on their differential location.

Ha₃: Perceived norms of parents’ RCB will differ based on the family’s differential location.

Logistic regression will be used to test hypothesis 4. Logistic regression was chosen because the dependent variable is binary (Either students do not engage in RCB= 0 or students engage in RCB= 1). The reduced model will look at the odds of a student not engaging in RCB (RCB=0) and the odds of a student engaging in RCB (RCB=1) based on differential location.

Ha₄: Differential location will be positively related to risky credit card behavior.

The following independent variables were included in the reduced model: social learning observations, social learning conversations, perceived norms, and differential location. The demographic variables age, race, and gender were included in the regression model as control variables as prior studies have shown that these variables are related to social learning opportunities (Gutter, Copur, & Garrison, 2009; Gutter Copur, & Garrison 2010; Garrison & Gutter, 2010).

Due to the dependent variable being binary logistic regression is the analysis of choice. Linear regression works based on two key assumptions: the variance of RCB (y) is constant across all values of the independent variables (x) and the predicted values of RCB are normally distributed; however these assumptions are impossible when the values for the dependent variable are binary and must take on a value of either 0 or 1. Logistic regression does not require the predicted values of RCB to be normally distributed, instead logistic regression looks at the odds of RCB occurring under the circumstances of the independent variables.

Logistic regression will also be used to test hypothesis 5. The full model will look at whether or not differential location serves as a moderator for social learning on risky credit card behavior. The full model will take into account all the variables in the

reduced model (age, race, gender, social learning observations, social learning conversations, perceived norms, and differential location) and 3 new variables (Pell status*social learning conversations, Pell status*social learning observations, and Pell status*perceived norms) that take into account the effect a students' Pell status has on his/her social learning opportunities.

Ha₅: Differential location will serve as a moderator between the social learning opportunities and risky credit card behavior.

Once both the reduced and the full models have been tested the likelihood ratio will be calculated to compare the fit of the two models. The reduced model test whether there is a relationship between social learning and RCB when the independent variables are taken into account. The full model will test whether there is a relationship between social learning and RCB when differential location is treated as a moderating variable. The likelihood ratio test will determine if the full model where differential location (indicated by a students' Pell status) acts as a moderator is a better predictor of RCB than the reduced model.

Table 3-1. Summary of variables in reduced model

Dependent Variables	Independent Variables
Risky Credit Card Behavior	Differential Location
Engages in risky credit card behavior	Pell recipient
Does no engage in risky credit card Behavior	Non-Pell recipient
	Social Learning - Conversations
	Managing expenses
	Checking credit report
	Paying bills on time
	Saving and investing money
	Working with mainstream Financial Institution
	Buying Health Insurance
	Buying auto insurance
	Buying renters insurance
	Social Learning- Observations
	Managing expenses
	Checking credit report
	Paying bills on time
	Saving and investing money
	Working with mainstream Financial Institution
	Buying Health Insurance
	Buying auto insurance
	Buying renters insurance
	Perceived Norms
	Use credit cards for everyday expenses
	“Max Out” credit cards
	Make late payments on cards
	Go over credit limit
	Do not fully pay off their monthly credit card bills
	Overdraw their checking account
	Sex
	Male
	Female
	Age
	Please indicate your age
	Race
	White (Non-Hispanic)
	African America (Black)
	Hispanic
	Other

Table 3-2. Summary of variables added to reduced model to form full model

Dependent Variables	Independent Variables
	Pell Status* Social Learning- Conversations Managing expenses Checking credit report Paying bills on time Saving and investing money Working with mainstream Financial Institution Buying Health Insurance Buying auto insurance Buying renters insurance
	Pell Status* Social Learning- Observations Managing expenses Checking credit report Paying bills on time Saving and investing money Working with mainstream Financial Institution Buying Health Insurance Buying auto insurance Buying renters insurance
	Pell Status* Perceived Norms Use credit cards for everyday expenses “Max Out” credit cards Make late payments on cards Go over credit limit Do not fully pay off their monthly credit card bills Overdraw their checking account

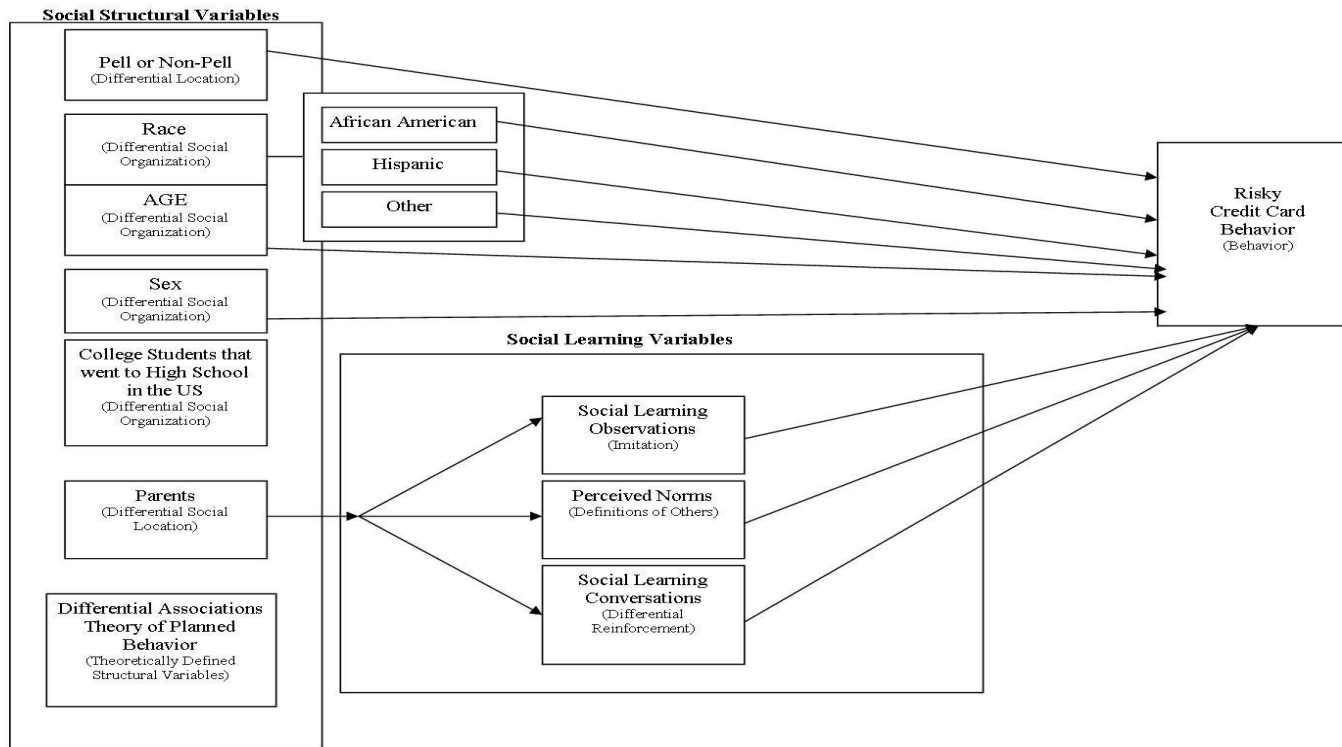


Figure 3-1.Reduced social learning model test

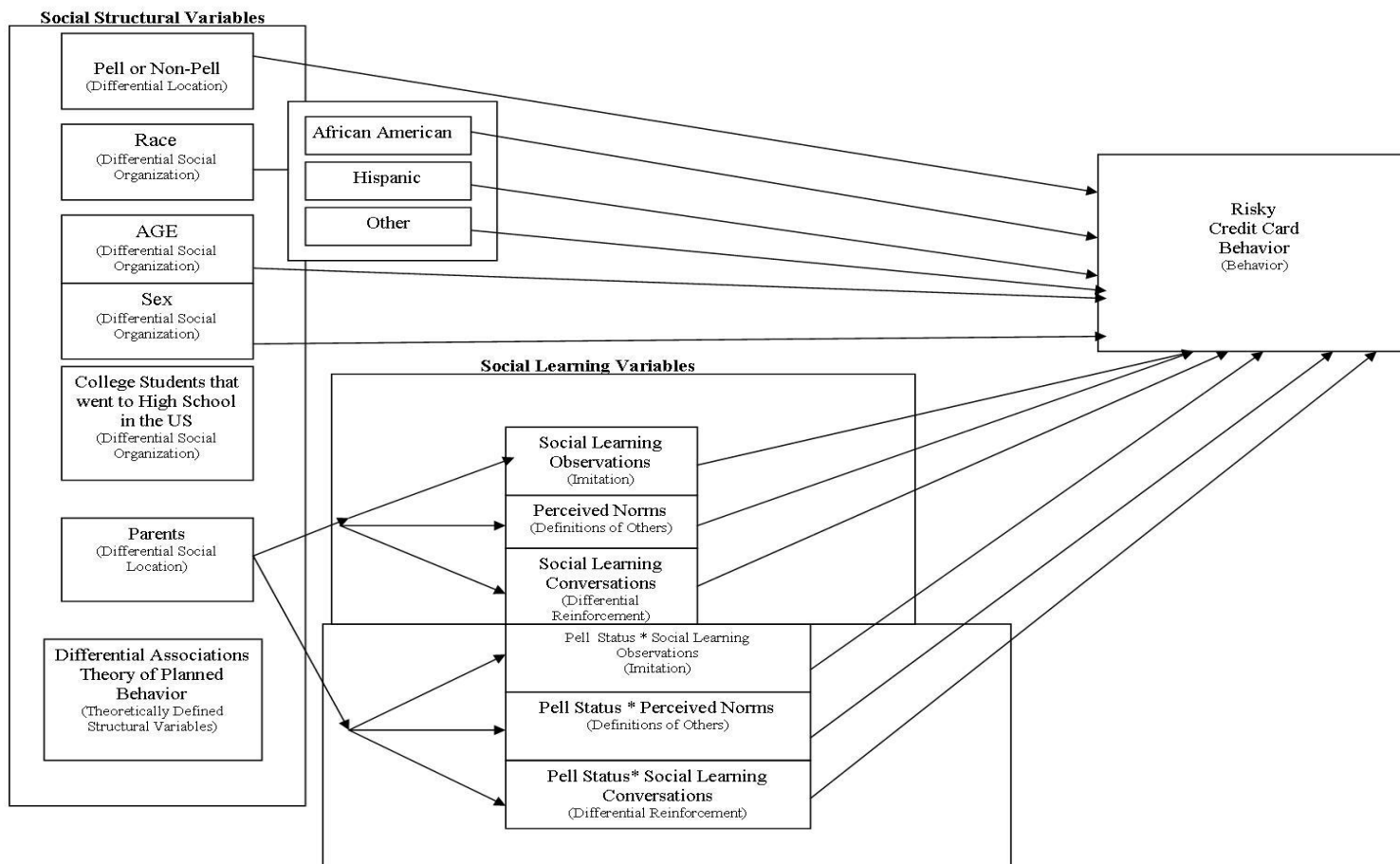


Figure 3-2 Full social learning model tested with reported betas and odds

CHAPTER 4 ANALYSIS

Analysis

This chapter will discuss describe the relationship between the independent variables and dependent variable. The results of the proposed hypothesis testing in Chapter 3 will be discussed. Descriptive statistics of the sample were run focusing on the variables age, race, and sex. Hypotheses 1, 2, 3 were tested using simple bivariate comparisons employing independent samples *t*-test. Hypothesis 4, what is the relationship between risky credit card behavior, observed social learning opportunities, social learning opportunities differentially reinforce through verbal communication, perceived norms, and differential location are related will be tested using a multinomial logistic regression.

Bivariate Analysis

Independent Variables

Descriptive Statistics

The Pell versus the Non-Pell groups (differential location) were compared based on the variables age, sex, and race. The variable age was compared by differential location (Pell or Non-Pell status) using an independent sample *t*-test. Non –Pell students had an average social learning observations score age of 21.27 and Pell students had an average age of 21.46 ($t=-1.964$, $p=.050$).The results of the *t*-test showed significant differences when comparing the frequency of social learning observations by differential location.

The variables sex was compared by differential location (Pell or Non-Pell status) using chi-squared. The chi-squared test statistic is 7.089 with a *p*-value of .008. The

results of chi-squared test show that need-based grants and gender are dependent. A higher percentage of females (65.9%) than males (34.1%) sampled receive Pell grants.

The race variables (White, Black, Hispanic, Other) were compared by differential location (Pell or Non-Pell status) using chi-squared. The chi-squared test statistic is 431.224 with a p -value of .000. The results of chi-squared test show that need-based grants and race are dependent. Further, a larger proportion of whites (non-Hispanics) (70.6%) sampled receive Pell grants than African-Americans (9.7%), Hispanics (10.2%), and of people surveyed from other ethnicities (9.31%).

Social Learning Opportunities

Non –Pell students had an average social learning observations score of 27.510 and Pell students had a mean score of 25.192 ($t=-6.428$, $p=.000$).The results of the t -test show a significant difference between the average frequencies that Pell versus Non-Pell students have observed their parents engaging in positive financial behaviors.

For Non-Pell students the social learning conversations mean score was 22.21. For Pell students the mean score was 21.23 ($t= 5.570$, $p=.000$). The results of the t -test show a significant difference between the average frequencies that Pell versus Non-Pell students have talked with their parents about engaging in positive financial behaviors.

The average perceived norms score for Non-Pell students was 10.492. The mean score for Pell students was 11.211 ($t=-6.428$, $p=.000$). Pell students think their parents engage in risky credit card behaviors more frequently than Non-Pell students.

Dependent Variable

Risky Credit Card Behavior

Chi squared was use to test whether RCB is independent or dependent of students' Pell status. The asymptotic significance is 0.000 which is less than .05 indicating that Pell or Non-Pell status and risky credit card behavior are dependent ($\chi^2=149.847$, $df=1$, $p=.000$). Risky credit card behavior is not distributed equally between Pell and Non-Pell status. Further, the contingency table showed a higher percentage of Pell recipients sampled engage in risky credit card behavior than Non-Pell students sampled.

Multivariate Analysis: Logistic Regressions

Reduced Model – Logistic Regression

Hypothesis 4: Differential location will be positively related to risky credit card behavior was tested using logistic regression. The relationship between age, race, gender, social learning observations, social learning through conversations, and perceived norms on risky credit card behavior is analyzed using logistic regression analysis.

Demographics

The following demographic variables were entered into the model: age, sex, Pell status, race. For the variable age beta (β) is .157 with a p -value of .000. Age is positively related to RCB, so as the student gets older he or she is more likely to participate in risky credit card behavior. For β the variable sex is .258 with a p -value of .000 indicating that being female is positively related to risky credit card behavior; in other words, females are more likely than males (who served as reference gender in the analyses) to participate in RCB. When compared to Whites (reference group in the analyses) Blacks and Hispanics are more likely to engage in RCB. For the variable of

RCB regressed on Pell status/need-based aid, β is .569 with a p -value of .000. This result indicates that students who have need-based financial aid more likely engaged RCB.

The variable race used in the initial survey was separated out by ethnicity for analysis in to three groups: African American, Hispanic, and Other (including American Indian, Asian, and any other identified ethnicity). Whites (Non-Hispanics) were used as the reference group. For the variable Race-African American β is .729 with a p -value of .000. For the variable Race-Hispanic β is .617 with a p -value of .000. For the variable Race-Other β is .254 with a p -value of .1. Race-African American, Race-Hispanic, and Race-Other are all related to RCB.

Social learning opportunities

For NRCB to RCB, the Wald test statistic for the predictor social learning observations is 14.341 with a p -value of .000. As the frequency of survey participants' social learning observations increase, RCB would be expected to decrease by -.014. It can be concluded that social learning observations are negatively related to engaging in RCB.

For NRCB to RCB, the Wald test statistic for the predictor social learning conversations is 3.362 with a p -value of .067. β is .008. As the frequency of survey participants social learning conversations increase, the RCB would be expected to increase by .008. It can be concluded that social learning conversations are positively related to engaging in RCB.

For RCB to NRCB, the Wald test statistic for the predictor perceived norms of parents is 186.603 with a p -value of .000. As students' perceived norms about

engagement in risky credit card behavior increase the students' RCB would be expected to increase by .088. It can be concluded that perceived norms are positively related to RCB.

Needs based aid equals zero

For NRCB to RCB, the Wald test statistic for needs based aid equals zero is 79.669 with a p -value of .000. As students' reliance on needs based aid increases (EFC decreases) engaging in RCB would be expected to increase by .569. It can be concluded that receiving needs based aid is positively related to RCB.

Full Model- Logistic Regression

Hypothesis 5: Differential location will serve as a moderator between the social learning opportunities and risky credit card behavior was also tested using logistic regression. To test whether family financial strength acts as a moderator the following variables were added into the regression equation: Pell status*Social learning observations, Pell status*social learning conversations, Pell status*perceived norms.

Pell status*Social learning Opportunities

For RCB to NRCB, the Wald test statistic for the predictor social learning observations is .395 with a p -value of .530. When a students' receipt of needs based aid is considered and the frequency of survey participants social learning observations decrease, the log-odds of not engaging in RCB over engaging in RCB would be expected to decrease by -.006. It can be concluded that a students' Pell Status (as indicated by receipt of needs based aid) is not a significant moderator of social learning observations and RCB.

For NRCB to RCB, the Wald test statistic for the predictor social learning conversations is .050 with a p -value of .0822. When a students' receipt of needs based aid is considered and the frequency of survey participants social learning conversations increase, the log-odds of engaging in RCB over engaging in RCB would be expected to increase by .048. It can be concluded that a students' Pell status (as indicated by receipt of needs based aid) status is not significant moderator of social learning conversations and RCB.

For RCB to NRCB, the Wald test statistic for the predictor perceived norms of parents is 6.153 with a p -value of .013. When a students' receipt of needs based aid is considered and students' perceived norms about parents engagement in risky credit card behavior increase the students' log-odds of engaging in RCB would be expected to decrease by -.033. It can be concluded that a students' students' Pell status (as indicated by receipt of needs based aid) is positively related to and is a significant moderator of social learning conversations and RCB.

Likelihood-Ratio test

While not all of the social learning opportunity measures were found to be significantly related to RCB once differential location (the student's Pell Status) was considered the full model may still be a better fit than the model that does not consider differential location as a moderator. In order to compare the fit of the null (reduced model) and the full (alternative) model a likelihood-ratio test was conducted. The likelihood for the null model is 8324.524. The likelihood for the full model is 8317.638. The test statistic is -0.0016 . The test statistic is not significant at .05. Do not reject H_0 . The reduce model (where receipt of Pell is not considered a moderator) is a better predictor than the full model.

Table 4-1. Sample profile by differential location

Variable	Mean/Proportion		Significance Test
	Non-Pell	Pell	
Sex			
Male	34.7%	32.0%	$\chi^2= 7.089$
Female	65.3%	68.0%	$\chi^2= 7.089$
Race			
White	81.4%	18.6%	$\chi^2=299.502^{***}$
Black	55.2%	44.8%	$\chi^2=280.343^{***}$
Hispanic	63.7%	36.3%	$\chi^2=123.146^{***}$
Other	76.1%	23.9%	$\chi^2= 6.811^{**}$
RCB			
Do not engage in any RCB	60.8%	43.9%	$\chi^2=186.648^{***}$
Engage in at least 1 RCB	39.2%	56.1%	$\chi^2=186.648^{***}$
Age	21.27	21.46	-1.964*
Social Learning Opportunities			
Social Learning-Conversations	22.214	22.232	5.646***
Social Learning- Observations	27.510	25.192	11.777***
Perceived Norms	10.492	11.211	-6.428***

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 4-2.Reduced model- differential location and risky credit card behavior

Variable	β	Wald	SE	Odds ratio
Sex(Female)	.258***	20.394	.057	1.245
Race (whites used as reference group)				
Black	.729***	25.373	.137	1.758
Hispanic	.617***	30.095	.109	1.819
Other	.254**	6.631	.098	1.208
Age	.157***	353.584	.008	1.170
Pell Status	.569***	79.669	.064	1.767
Social Learning Opportunities				
Social Learning-Conversations	.008	3.362	.004	1.012
Social Learning- Observations	-.014***	14.341	.004	.986
Perceived Norms	.008***	186.603	.006	1.099

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 4-3.Full Model-differential location moderating risky credit card behavior

Variable	β	Wald	SE	Odds ratio
Sex	.256***	20.064	.057	1.292
Race (whites used as reference group)				
Black	.723***	24.943	.145	2.060
Hispanic	.615***	29.941	.112	1.850
Other	.251	6.487	.099	1.285
Age	.170***	356.560	.009	1.186
Social Learning Opportunities				
Social Learning-Conversations	.012	181.300	.008	1.106
Social Learning- Observations	-.013***	8.829	.005	1.008
Perceived Norms	.100***	154.421	.008	.987
Pell Status	1.133	18.135	.266	3.104
Social Learning Opportunities * Pell Status				
Social Learning-Conversations* Pell status	-.002	.050	.010	.998
Social Learning- Observations* Pell status	-.006	.395	.009	.994
Perceived Norms	-.033*	6.153	.013	.967
Likelihood-Ratio test for full versus reduced model	D= -	18.134***		

* $p < .05$, ** $p < .01$, *** $p < .001$

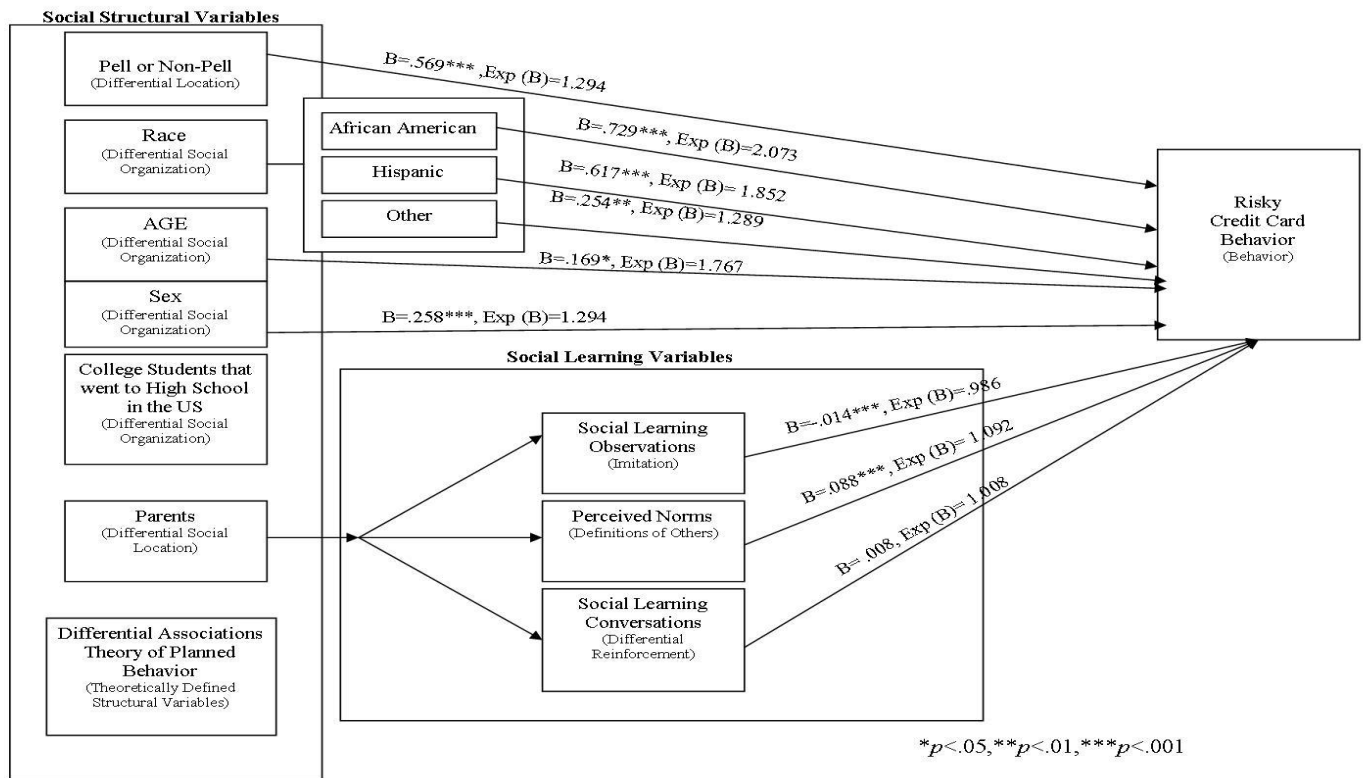


Figure 4-1.Reduced model tested with betas and odds ratios

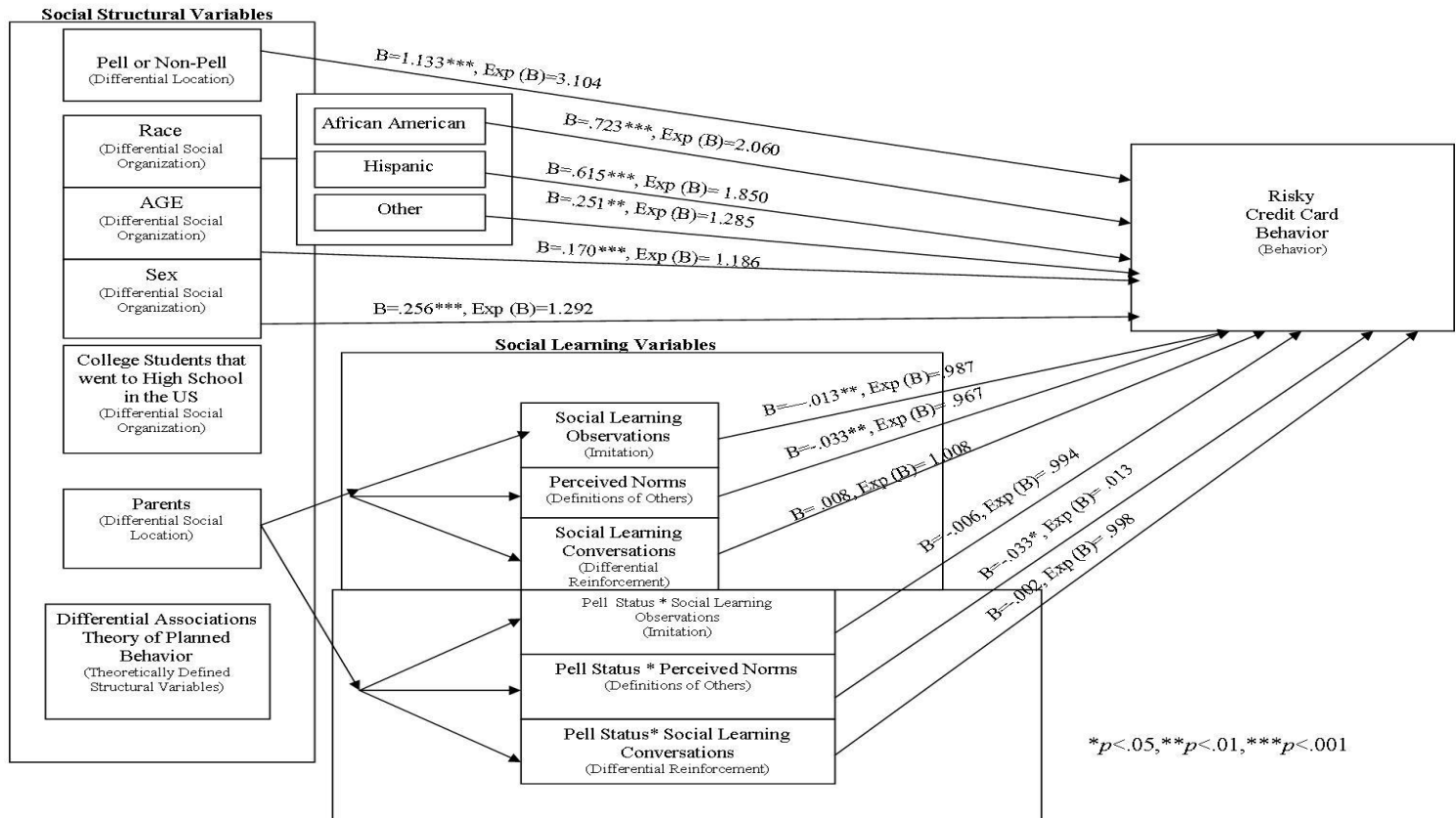


Figure 4-2. Full model with betas and odds ratios

CHAPTER 5 CONCLUSION AND IMPLICATIONS

Conclusion

Differential Location and Social Learning Observations

Hypothesis 1 stated that observed financial social learning opportunities will differ between students from families with lower family financial strength and students who have greater family financial strength. The results for the χ^2 test and the t -test indicate that there is a difference between families with lower family financial strength and student who have greater family financial strength. It can be concluded that opportunities to observe positive financial behaviors are not the same for students who receive Pell and students that do not receive Pell grants. Students that do not receive Pell grants observe their parents engaging in positive financial behaviors on average more frequently than students who receive Pell grants.

Differential Location and Social Learning Conversations

Hypothesis 2 stated that opportunities to engage in financial social learning conversations will differ between students from families with lower family financial strength and students who have greater family financial strength. The results for the χ^2 test and the t -test indicate that there is a difference between students who receive Pell grants and students who do not receive Pell grants. It can be concluded that the frequency of opportunities for conversations about positive financial behaviors is not the same for students who receive Pell grants and students who do not. Students that do not receive Pell grants discuss with their parents positive financial behaviors on average more frequently than students who receive Pell grants.

Differential Location and Perceived Norms

Hypothesis 3 stated perceived norms of individuals from families with lower family financial strength will differ from students who have greater family financial strength. The results for the χ^2 test and the t -test indicate that there is a difference between families with lower family financial strength and student who have greater family financial strength. It can be concluded that the perceived norms about risky credit card behaviors is not the same for students that receive Pell grants and students that do not receive Pell grants. Students who receive Pell grants are on aver more likely to perceive their parents engage in risky credit card behavior.

Differential Location and RCB

Hypothesis 4 stated differential location will be positively related to risky credit card behavior. The results from the χ^2 test indicate that family financial strength is positively related to risky credit card behavior. It can be concluded that as reliance on needs based assistance increases risky credit card behavior will increase.

Differential Location as a moderator between social learning and RCB

Hypothesis 5 stated differential location will served as a moderator between the social learning opportunities and risky credit card behavior. In the full model once differential location was taken into account the only social learning opportunities measure significantly related to RCB was perceived norms. The likelihood ratio test showed the reduced model was a better fit than the full model. Hence it can be concluded that differential location does not serve as moderator between social learning and RCB. Other facts such as race or gender may in fact play a more significant role in this relationship.

Discussion and Findings

The findings of this research are interesting because this study takes a closer look at the social learning opportunities measure used in prior research. This study looked individually at each of the three components of the social learning measure and their relationship on risky credit card behavior: social learning conversations, social learning observations, and perceived norms. Social learning opportunities were found to be significantly different for Non-Pell and Pell student. This indicates that additional knowledge and awareness of positive financial practices maybe need by families with lower financial strength.

Additionally, similar to prior research (Gutter & Garrison, 2008) social learning opportunities , specifically perceived norms were found to be related to RCB. By breaking down the traditional social learning opportunities measure into its three components we are able to see how each component affects financial social learning. When differential location was introduced in to the model the social learning opportunities measures did not perform as expected. While social learning observations and conversation were significant before differential location (family financial strength) was introduced they were not significant once differential location was introduced. Perceived norms was the only social learning opportunities measure to still show up as significant once differential location was taken into consideration. This indicates that less frequent social learning observation and conversations about positive behaviors may be related to an increase perceived norms in favor of risky credit card behavior. Further, this study reconfirms the significance of perceived norms with regards to engaging in risky credit card behavior.

Implications

Currently financial socialization is seen as primarily the responsibility of parents. Based on the finding of this study, financial socialization by parents alone may not be sufficient. Students from lower income families appear to have been exposed to financial socialization opportunities from parents less frequently than students from families with greater financial strength.

One of the main ways that parents can assist their children with financial socialization is by being aware of the importance of talking with their children about money and the frequency with which they talk to their children about money and risky credit card behaviors. If parents realize that they infrequently speak with their children about money they can try to create more opportunities to talk with their children about money. As some parents may not be knowledgeable about various financial topics they themselves can seek out additional information and resources and discuss the information they receive with their children.

For students that receive needs based grants/aid one of the first steps to avoiding risky credit card behavior knows that they may be at risk. These students can seek out additional financial social learning opportunities from their parents. If parents are unable to provide financial guidance student can and should consider taking a class on personal finance to increase their capabilities.

Practitioners can target more programming towards families with lower financial strength. They can increase marketing of these programs in low to moderate income communities. Additionally they can partner with college campus to deliver additional financial training to incoming freshman.

Additional research is need on financial socialization and the social learning opportunities components. It would be interesting to see if Pell status would moderate or fail to moderate social learning opportunities when other financial behaviors are considered.

APPENDIX A SURVEY QUESTIONS

This appendix contains the survey question used in this study. The original questions are from a much large data set on Financial Management Practices of College Students from States with Varying Financial Education Mandates.

2.1 Question: What Is your current age?
(open ended)

2.4 Question: Which of the following best describes your race/ethnicity?
White
African American
Asian
Native American
Other (please specify)

2.5 Question: What sex are you?
Male
Female

3.7 Question: What types of financial aid, if any, are you currently receiving? (Check all that apply.)
None
Federal student loans (i.e. Stafford)
Federal work-study
Need-based grants (i.e. Pell)
Scholarships
Tuition Wavier
Other (please specify)

8.1 Question: How often did your parents/ caregiver discuss each of the following with you in the past five years?
Managing expenses and avoiding overspending
Checking credit report
Paying bills on time
Saving and investing money
Working with a mainstream financial institution like a bank or credit union (as opposed to payday lenders)
Buying and maintaining health insurance
Buying and maintaining auto insurance
Buying and maintaining renters insurance

9.1 Question: How often have you observed your parents/caregivers involved in the following during the past five years?

- Managing expenses and avoiding overspending
- Checking credit report
- Paying bills on time
- Saving and investing money
- Working with a mainstream financial institution like a bank or credit union (as opposed to payday lenders)
- Buying and maintaining health insurance
- Buying and maintaining auto insurance
- Buying and maintaining renters insurance

13.1 How often do you think your parents do each of the following (only choose N/A if your parents have no credit cards)?

- Use credit cards for everyday expenses
- “Max out” their credit cards
- Make late payments on their credit cards
- Go over the credit limit on their credit cards
- Do not fully pay off their monthly credit card bills
- Overdraw their checking account

15.4 Think about all the credit cards you have. What is the total amount you currently owe on all of your credit cards?

- \$0 (I do not owe any money on my credit cards.)
- \$1-\$499
- \$500-\$999
- \$1,000 to \$2,999
- \$3,000-\$4,999
- \$5,000 or more
- Not sure

15.8 Think about your own typical behaviors. Indicate how many times you did each of the following during the last year. Only choose N/A if you do not have credit cards in your own name.

- “Max out” your credit cards
- Make late payments on your credit card
- Do not pay off your credit card balance fully each month

APPENDIX B
VARIABLE CODING

Variable	Coding
Risky Credit Card Behavior	Sum of indicators is 0=None, Any 1
“Max Out” credit cards	0=None, Any=1
Make late payments on cards	0=None, Any=1
Do not fully pay off their monthly credit card bills	0=None, Any=1
Balance of \$1000 or more	0=\$999.99 or less, 1=\$1000 or more
Credit Card Balance	\$999 or less =0, \$1000+ = 1
Differential Location	0= Non-Pell recipient ,1= Pell recipient
Social Learning – Conversations	Sum of Scale Scores
Managing expenses	Scale Score
Checking credit report	Scale Score
Paying bills on time	Scale Score
Saving and investing money	Scale Score
Working with mainstream Financial Institution	Scale Score
Buying Health Insurance	Scale Score
Buying auto insurance	Scale Score
Buying renters insurance	Scale Score
Social Learning- Observations	Sum of Scale Scores
Managing expenses	Scale Score
Checking credit report	Scale Score
Paying bills on time	Scale Score
Saving and investing money	Scale Score
Working with mainstream Financial Institution	Scale Score
Buying Health Insurance	Scale Score
Buying auto insurance	Scale Score
Buying renters insurance	Scale Score
Perceived Norms	Sum of Scale Scores
Use credit cards for everyday expenses	Scale Score
“Max Out” credit cards	Scale Score
Make late payments on cards	Scale Score
Go over credit limit	Scale Score
Do not fully pay off their monthly credit card bills	Scale Score
Overdraw their checking account	Scale Score
Sex	0=Male, 1= Female
Age	Scale Score

Variable	Coding
Race(Reference= White Non-Hispanic)	
African America (Black)	0=all other races, 1= African American(Black)
Hispanic	0= all other races, 1= Hispanic
Other	0=White, African American, Hispanic; 1= Other
Pell Status* Social Learning - Conversations	0= Non-Pell, Scale Score*1=Pell
Managing expenses	Scale Score
Checking credit report	Scale Score
Paying bills on time	Scale Score
Saving and investing money	Scale Score
Working with mainstream Financial Institution	Scale Score
Buying Health Insurance	Scale Score
Buying auto insurance	Scale Score
Buying renters insurance	Scale Score
Pell Status* Social Learning- Observations	0= Non-Pell, Scale Score*1=Pell
Managing expenses	Scale Score
Checking credit report	Scale Score
Paying bills on time	Scale Score
Saving and investing money	Scale Score
Working with mainstream Financial Institution	Scale Score
Buying Health Insurance	Scale Score
Buying auto insurance	Scale Score
Buying renters insurance	Scale Score
Pell Status* Perceived Norms	0= Non-Pell, Scale Score*1= Pell
Use credit cards for everyday expenses	Scale Score
“Max Out” credit cards	Scale Score
Make late payments on cards	Scale Score
Go over credit limit	Scale Score
Do not fully pay off their monthly credit card bills	Scale Score
Overdraw their checking account	Scale Score

APPENDIX C
RCB CUMULATIVE MEASURE

Table C-1. Reduced Model-OLS regression of RCB

Variables	Estimate	SE	Wald
Four risky credit card behaviors (0 = Reference)	-6.185***	.203	926.717
Three risky credit card behaviors	-4.848***	.194	626.752
Two risky credit card behaviors	-3.745***	.189	392.166
One risky credit card behaviors	-2.701***	.186	209.788
Age	-.084***	.006	228.477
Differential Location	-.485***	.057	73.325
Sex-Female (Male Reference)	-.192***	.050	14.444
Race-African American (White reference)	-.666***	.124	28.960
Race-Hispanic	-.532***	.101	28.049
Race-Other	-.189*	.089	4.491
Perceived Norms	-.089***	.006	250.695
Social Learning-Conversations	-.014***	.004	13.923
Social Learning-Observations	.017***	.003	25.211

* $p < .05$, ** $p < .01$, *** $p < .001$

Table C-2. Full Model- OLS regression RCB

Variables	Estimate	SE	Wald
Four risky credit card behaviors (0 = Reference)	-6.294***	.215	854.633
Three risky credit card behaviors	-4.957***	.206	577.114
Two risky credit card behaviors	-3.854***	.202	363.607
One risky credit card behaviors	-2.809***	.200	198.180
Age	-.084***	.006	228.831
Differential Location	-.838***	.229	13.360
Sex-Female (Male Reference)	-.190***	.229	13.360
Race-African American (White reference)	-.657***	.124	28.101
Race-Hispanic	-.532***	.124	28.101
Race-Other	-.186*	.089	4.346
Perceived Norms	-.095	.007	181.815
Social Learning-Conversations	-.012**	.004	8.575
Social Learning-Observations	.014***	.004	13.368
Pell status* Perceived Norms	.014	.008	2.970
Pell status* Social Learning-Conversations	-.008	.009	.888
Pell status* Social Learning-Observations	.016	.011	2.043

* $p < .05$, ** $p < .01$, *** $p < .001$

Table C-3. Variable Coding of RCB Cumulative

Variable	Coding
Risky Credit Card Behavior	Sum of indicators is 0=None, Any 1
"Max Out" credit cards	0=None, Any=1
Make late payments on cards	0=None, Any=1
Do not fully pay off their monthly credit card bills	0=None, Any=1
Balance of \$1000 or more	0=999.99 or less, 1=\$1000 or more

***All other variables coded the same as in original model (appendix b)

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BIOGRAPHICAL SKETCH

Kristin Jackson graduated from the University of Florida in fall of 2003 with a Bachelor of Arts in criminology with a minor in sociology. In Fall of 2008, she began the Master of Science in Family, Youth, and Community Science. She has an interest in non-profit organizations and financial planning.