FINANCIAL STANDING IN THE WORKPLACE: EMPLOYEE FINANCES AS A BARRIER TO JOB PERFORMANCE

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Over 100 years of organizational research has been devoted to the study of employee performance. Although theoretical models of performance have argued that employees require motivation, ability, and opportunity to perform at work, this research has primarily viewed money as a motivational lever with less attention offered to its impact on the latter dimensions. Across three essays, this dissertation expands this literature by developing and testing theory regarding how a person's financial standing can spill over into their performance ability and opportunity. Essay 1 discusses the conventional approach to the role of money in employee performance and proposes moving from conceptualizing money in terms of compensation and incentives to employees' financial standing as a means of departing from the primary treatment of money as a motivator. This discussion is followed by the development of two conceptual models that explain the mechanisms underlying a relationship between employees' financial standing and their ability and opportunity to perform at work. Essay 2 examines the hypotheses regarding the impact of personal finances on performance ability using a field study and a laboratory experiment. Essay 3 investigates the hypotheses related to the impact of financial standing on the selection for performance opportunities in a series of four vignette experiments. Overall, my dissertation offers a novel perspective on the role of money in work behavior with important implications for organizational theory, managerial practice, and public policy.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

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INTRODUCTION

The current economic context in the United States and many other developed economies, marked by underemployment, stagnating household incomes, increasing costs of education and healthcare, and government austerity measures (American Psychological Association, 2015; Desilver, 2014; Kochan, 2013; Mishel, Bivens, Gould, & Shierholz, 2012; Osterman & Shulman, 2011; Stiglitz, 2015), is straining people's financial welfare. Data reported by Desilver (2014), for example, indicates that more than half (56%) of families in the United States feel their income is falling behind their cost of living. Concurrently, data from the Federal Reserve Bank (2015) demonstrates that most U.S. households are spending all or more than their total income and do not have $400 available if an emergency were to arise. Consequently, a considerable proportion of the population is increasingly prone to being worried about their finances. Indeed, the American Psychological Association's (2015) report on financial wellness indicates that money is a significant source of worry for most American households, more so than family, work, or health-related concerns.

These trends in personal finance have not gone unnoticed by the social science community, as the behavioral consequences of people's personal finances have garnered considerable academic interest (e.g., Bertrand, Mullainathan, & Shafir, 2004, 2006; Durante, Griskevicius, Redden, & White, 2015; Fernbach, Kan, & Lynch, 2015; Mani, Mullainathan, Shafir, & Zhao, 2013; Mullainathan & Shafir, 2013; Shah, Mullainathan, & Shafir, 2012; Shah, Shafir, & Mullainathan, 2015; Sharma & Alter, 2012; Spears, 2011; Vohs, 2013). Organizational science, however, has predominantly remained on the sidelines in this domain despite the increased public interest surrounding income disparities (Leana & Meuris, 2015; Piketty, 2014;

Shaw, 2014), increased use of management practices that promote societal inequality (Bidwell, Briscoe, Fernandez-Matteo, & Sterling, 2013; Cappelli, 1999; Kalleberg, 2009; Lambert, 2008), and calls for the adoption of management philosophies centered around the value of employee welfare for organizational sustainability (Osterman, 2018; Pfeffer, 1998, 2010; Ton, 2014). Although organizational scholars have shown an interest in the effect of money on work behavior, their focus has remained largely on compensation and incentives (e.g., Gerhart & Rynes, 2003; Rynes, Gerharts, & Parks, 2005; Shaw & Gupta, 2015) with much less attention devoted to the potential effects of employee's person finances on their cognition, affect, and behavior at work (Leana & Meuris, 2015; Leana, Mittal, & Stiehl, 2012).

My dissertation, comprised of three essays, aims to develop a framework for incorporating employees' personal finances into organizational science, and consequently, moving beyond the primary consideration of money as a motivational lever. In furtherance of this goal, the three essays collectively identify two ways in which people's financial standing, defined here as their objective financial state, may affect their job performance: (a) worry about being in poor financial standing can undermine their ability to perform, and (b) information suggestive of their financial standing can limit or facilitate the performance opportunities they are selected for. Essay 1 summarizes the motivation-ability-opportunity model of employee performance (Aldag & Brief, 1979; Blumberg & Pringle, 1982; Locke & Latham, 1990; Viteles, 1953) and how scholars have conventionally approached the role of money in relation to this framework. More specifically, prior work has primarily considered money as a means of motivating people to join an organization and/or put effort toward their work tasks (Akerlof, 1984; Cappelli, 1999; Gerhart & Rynes, 2003). This essay subsequently proposes that moving the conceptualization of money from compensation and incentives to employees' financial

standing can facilitate the expansion of organizational theory beyond its focus on money as a motivator of performance to a broader perspective where money concurrently can influence employees' ability and opportunity to perform. Following this discussion, two theoretical models are developed that link a person's financial standing to his or her ability and opportunity to perform, respectively.

Essay 2 investigates the hypotheses regarding the effect of financial standing on performance ability developed in Essay 1, combining a field study with survey and archival data with a laboratory experiment. Subsequently, Essay 3 examines the hypotheses related to the relationship between financial standing and performance opportunities using a series of four exploratory experiments. The following sections summarize the main arguments and findings of each essay and discuss their joint contributions for organizational theory, management practice, and public policy.

1 ESSAY 1

The first essay in this dissertation proposes expanding how scholars view the role of money in employee performance by considering their financial standing as an important antecedent of their on-the-job performance. Drawing on the motivation-ability-opportunity model (Aldag and Brief, 1979; Blumberg and Pringle, 1982; Locke and Latham, 1990; Viteles, 1953), Essay 1 posits that money has been primarily viewed as a motivational lever in organizational science with a limited focus on its direct impact on the latter mechanisms (Leana & Meuris, 2015). Indeed, there is an extensive literature detailing how compensation practices can impact performance through motivation (see Gerhart & Rynes, 2003; Rynes et al., 2005; Shaw & Gupta, 2015 for reviews) while the role of money on ability and opportunity has received relatively less attention. Even

when the impact of money on performance ability is examined, scholars tend to approach it from a similar perspective as the incentives literature with most research focused on how higher levels of compensation can increase the aggregate knowledge and skills within a firm's workforce by attracting and retaining high-ability employees (Cappelli, 1999; Gerhart & Rynes, 2003). Thereby, money serves a role in enhancing the performance ability of the employee population by increasing an organization's aggregate knowledge, skills, and abilities. Conversely, scholars interested in the role of money in performance opportunity have mostly focused on the effect of socio-economic status, of which income is a component and often the primary measure (Côté, 2011), on the attainment of performance opportunities. This literature primarily attributes the impact of socio-economic status on opportunity to differences in the social resources available within professional networks (Campbell, Marsden, & Hurlbert, 1986; Lin, 1999).

After outlining the conventional approach to the role of money in each dimension of employee performance, this essay proposes considering the impact of people's financial standing and their subjective appraisals of it on their job performance as a means of moving beyond the primary focus on motivation. That is, organizational research has primarily conceptualized money as the compensation schemes that people work under. However, a substantial literature suggests that their financial standing can affect organizational outcomes beyond those attributed to compensation (see Leana & Meuris, 2015 for review). As such, Essay 1 proposes that broadening the conceptualization of money from compensation and incentives to employees' financial standing can expand the consideration of money in the motivation-ability-opportunity model beyond the primary focus on motivation. Subsequently, Essay 1 develops conceptual models and hypotheses centered around how a person's financial standing can undermine his or

her ability and opportunity to perform at work, and the mechanisms and boundary conditions that may contribute to these effects.

1.1 Employee finances and performance ability

Essay 1 proposes that employees' financial standing can affect their ability to perform at work by increasing their propensity to experience financial worry, which subsequently can spill over into their job performance through its impact on their cognitive capacity. Consequently, Essay 1 hypothesizes that people in poor financial standing are more likely to be worried because resource loss, or the anticipation thereof, prompts people to become worried about their situation (Ennis, Hobfoll, & Schröder, 2000; Hobfoll, 1998). Indeed, although financial worry is distinct from one's financial standing (Ackerman & Paolucci, 1983; Leana & Meuris, 2015), decreases in a person's financial standing are often accompanied by an increased propensity to be worried, as economic shocks will tend to be more frequent and/or impactful with limited money at one's disposal.

Financial worry, conversely, can decrease cognitive capacity through two mechanisms: (a) a direct "tunneling effect" and (b) an indirect emotional suppression effect. Consistent with recent research in behavioral economics documenting a relationship between scarcity and cognitive functioning (Mani et al., 2013; Mullainathan & Shafir, 2013), it is hypothesized that employees' financial worry has a negative direct effect on their working memory because they attend to the perceived threat to their well-being (Staw, Sandelands, & Dutton, 1981). Essay 1 further argues that financial worry can also indirectly reduce working memory by increasing the frequency of emotional suppression. That is, financial worry is a strong emotional experience (e.g., Hofhauser & Fehr, 2014), which people are often motivated to suppress in anticipation of

its interference with their goal pursuits. Emotional regulation requires substantial cognitive effort and, as a result, will detract cognitive capacity away from other tasks (Frijda, 1986; Gross, 1998). Thus, financial worry could also reduce cognitive capacity through increases in emotional suppression.

Finally, the model proposed in Essay 1 argues that the reductions in cognitive capacity attributable to being in poor financial standing and the experience of financial worry can spill over into organizational functioning by undermining an employee's job performance. As employees focus on their financial standing and suppress the negative emotions associated with financial worry, they tend to have less cognitive capacity available for other concerns (e.g., Kahneman, 1973; Sweller, 1988). While considerable research suggests that financial worry could also potentially enhance work motivation if employees devote more effort toward securing their jobs and avoiding loss (Brockner & Higgins, 2001; Higgins, 1998; Idson, Liberman, & Higgins, 2000) and/or attaining any performance incentives that may reduce their insufficiency (Shoss & Probt, 2012), the model and hypotheses offered in this essay suggest that financial worry can have also a debilitating impact on performance, given its influence on employees' cognitive capacity.

1.2 Employee finances and performance opportunity

Essay 1 further argues that financial standing can affect the number of performance opportunities an employee receives by serving as information in selection decisions. Specifically, organizational decision-makers may use cues of a person's financial standing in the formation of competence judgments when financial standing is attributed to dispositional causes. The perceived relationship between personal finances and competence is fueled by the tendency to

over-attribute financial standing to internal causes because evaluators underweight the influence of external events on a person's financial welfare (Cooper & Olson, 2015). As the *Behaviors from Intergroup Affect and Stereotypes* map (BIAS map - Cuddy, Fiske, & Glick, 2007) suggests, perceptions of incompetence lead to "passive exclusion" whereby people exclude or neglect the individual while perceptions of competence lead to "passive facilitation" whereby people favor the individual. Applying this theory to a selection context, organizational decision-makers may exclude people about whom they receive information that they are in poor financial standing from their groups, teams, and organizations because of these competence evaluations. Concurrently, decision-makers may facilitate opportunities for those who are believed to be in good financial standing. Therefore, financial standing is hypothesized to impact selection outcomes mediated by perceived competence.

Essay 1 further proposes that the relationship between financial standing and selection for performance opportunities can be strengthened or attenuated by two attributes of the decision-maker and two attributes of the candidate. First, decision-makers' beliefs about the fixedness of dispositions may increase the likelihood of internal attribution, and thus limit the consideration of financial standing in competence judgments. Prior research in social psychology has shown that people differ in their lay beliefs about the malleability and determinism of dispositions (Dweck, 2008; Nisbett & Ross, 1991). As fixedness beliefs increase, decision-makers may be more likely to use financial standing as a cue of "who they are" rather than a cue of their experience or background (Chiu et al., 1997). Thus, an increased belief in the fixedness of dispositions may increase the indirect relationship between people's financial standing and the selection for performance opportunities by strengthening the effect of a candidate's financial standing on decision-makers' evaluation of his or her competence.

Second, decision-makers' prevention focus may also impact the proposed relationship. Regulatory focus theory posits that people differ in their focus on their orientation toward the promotion of positive outcomes and the prevention of negative outcomes (Higgins, 1998). Organizational decision-makers with a prevention focus may be more likely to exclude candidates perceived as less competent due to their financial standing because they are more oriented towards avoiding false positives and thus reducing risk (Crowe & Higgins, 1997). Therefore, regulatory focus may enhance the indirect relationship between financial standing and performance opportunity by strengthening the relationship between perceived competence and selection.

Third, information regarding a candidate's socio-economic background may affect the relationship between financial standing and perceived competence by impacting the attributions that decision-makers make. Kelley's (1967) seminal model of attribution argues that internal attribution is most likely under high consistency of behavior across situations, low distinctiveness of behavior to the situation, and low consensus of behavior within the situation. Applied to the current context, candidates from a low socio-economic background may be less likely to have their poor financial standing internally attributed because decision-makers believe that it is a common experience under their conditions. In contrast, candidates from a high socio-economic background may be more likely to have a poor financial standing internally attributed. Thus, information related to a candidate's socio-economic background may affect the "consensus" dimension of attribution posited by Kelley's (1967) model, which subsequently can increase or decrease the likelihood of internal attribution and selection.

Finally, a candidate's prior task experience may also affect the indirect relationship between financial standing and selection for a performance opportunity because organizational

decision-makers anticipate a correlation between experience and future performance. Indeed, prior work has demonstrated the value of experience in task performance across several domains (Dane, Rockman, & Pratt, 2012; List, 2003; Staats & Gino 2012). In this context, decision-makers may be more forgiving of lower global competence evaluations when a candidate has a substantial experience advantage over other candidates in the specific task domain. Thus, an experience advantage may weaken the indirect relationship between financial standing and selection for performance opportunities by moderating the relationship between perceived competence and selection outcomes.

2 ESSAY 2

Essay 2 empirically examines the hypotheses related to performance ability developed in Essay 1. Specifically, given the role organizations have played in fostering the current trends in personal finance and financial worry through human capital strategies that increase economic uncertainty (e.g., Bidwell et al., 2013; Lambert, 2008; Meuris & Leana, 2015; Pfeffer, 2010), Essay 2 examines whether companies may be reaping what they have sown. Essay 2 investigates these hypotheses utilizing a multi-method approach combining field and laboratory data. Study 1 uses survey and archival data from a large sample of short-haul, full-time truck drivers employed by a regional transportation company. Short-haul truck drivers offer an interesting population to test the developed hypotheses because they are responsible for a task where performance can be attributed at the individual level of analysis. Furthermore, the drivers in this sample were representative of middle class employees with an average household income of $60,000 to $70,000 and reception of health insurance, retirement savings accounts, life insurance, and profit

sharing from their employers. Thus, this sample is different from the "working poor" where a poor financial standing and widespread financial worry would be expected (Leana et al., 2012). The survey data included measures of drivers' financial standing, financial worry, emotional suppression, and cognitive capacity. Archival performance data was collected following survey data collection. Performance was operationalized as the odds of a preventable accident within a pre-determined 8-month period following survey data collection.

In support of the hypotheses developed in Essay 1, Study 1 found that a drivers' financial standing was negatively related to financial worry, which in turn was negatively associated with his working memory. Financial worry had both a direct and indirect effect through emotional suppression on working memory. Furthermore, financial worry had a significant indirect effect on the odds of a preventable accident after controlling for various alternative explanations. A one-standard deviation increase in financial worry indirectly increased the probability of a preventable accident by 0.4% compared to an average driver. This increase in the propensity to have a preventable accident translates in 8 additional drivers with at least one preventable accident per year in the sampled company, which costs the company approximately $1.3 million per year in additional accident costs.

A second study was conducted in a laboratory environment to establish the causal relationship proposed in Essay 1. In Study 2, participants were recruited from online message boards to come into the laboratory for a 1-hour session. Participants were randomly assigned to imagine a small or large emergency expense using a hypothetical scenario where financial worry is expected among those in worse financial standing (Mani et al., 2013). Subsequently, participants completed two complex span tasks as a measure of cognitive capacity and were asked to complete a route in a driving simulator. Results indicate that participants in worse

financial standing assigned to the high expense condition performed worse on the cognitive tests and conversely performed worse in the driving simulation. Overall, the results further supported the hypotheses developed in Essay 1.

3 ESSAY 3

Using a series of four exploratory experiments, Essay 3 investigates whether, as argued in Essay 1, cues of a candidate's financial standing influence decision-makers' perceptions of candidates' competence and subsequently hinder or promote selection for valued opportunities after accounting for the variance explained in the selection decision by perceived warmth and performance expectations. Study 1 examined these relationships among a sample of MTurk workers using a hypothetical hiring scenario. This study found that a hypothetical job candidate's financial standing, indicated by their credit score relative to the population average, affected how participants evaluated her competence, and thus, influenced the candidate's probability of an interview request by the participant. Study 2 replicated the findings from Study 1 among a sample of MBA students. Study 2 further examined the moderating effect of two decision-maker characteristics, lay beliefs regarding the fixedness of dispositions and prevention focus, on the effect of financial standing on selection for performance opportunities, but did not find support for these hypotheses.

Study 3 examined the moderating effect of socio-economic background using the same methods as Study 1. MTurk participants received additional information suggestive of a candidate's socio-economic background originating from a pre-screening. Consistent with Studies 1 and 2, there was an indirect effect of financial standing on selection mediated by

perceptions of competence. Moreover, information regarding a candidate's socio-economic background did not significantly moderate this pattern. However, interestingly, there was a main effect of socio-economic background on selection: Candidates from low socio-economic backgrounds were generally more favored than candidates from high socio-economic backgrounds and candidates with no information about their background provided.

Finally, Study 4 examined the relationship between financial standing and selection using a different manipulation and outcome. Participants on MTurk were instructed to choose a teammate between two candidates for a task where their chosen partner's performance would be consequential to them. Each candidate's financial standing was manipulated by providing the participant information related to the condition of their car. Study 4 also investigated the effect of a task experience advantage on the relationships uncovered in the prior studies. Results provide additional support for an indirect effect of financial standing on selection for performance opportunities mediated by perceived competence. Furthermore, surprisingly, an experience advantage did not significantly moderate the indirect relationship between financial standing and selection.

Collectively, these studies suggest that, in addition to the consequences of financial standing on people's ability to perform examined in Essay 2, financial standing can also convey social information that may limit or promote the availability of performance opportunities, and thus potentially influence a person's professional advancement and social mobility. Considering these exploratory findings, Essay 3 offers several directions for future research in this domain.

4 CONCLUSIONS

One defining implication of these essays is that organizational science could be advanced by expanding the consideration of the role money plays in employee behavior and outcomes beyond motivation (Leana & Meuris, 2015). Indeed, companies may be more strongly affected by their employees' financial standing than previously evidenced. If being in poor financial standing undermines employees' ability to perform and their attainment of professional opportunities, organizations have an interest in addressing and improving their financial welfare (Meuris & Leana, 2015). Hopefully, the findings of these essays encourage both scholars and organizations to consider employees' financial standing as an important component of human capital strategy, but also serve as a theoretical framework for expanding research within this domain.

More broadly, my dissertation speaks to the impact of financial standing on social stratification. Although scholars have long understood that work and organizations play a role in generating societal inequality (Marx, 1987; Weber, 1922; see Baron, 1984 for review), the essays enclosed in this dissertation suggest two additional mechanisms through which organizations can hamper social mobility: People in poor financial standing may be disadvantaged both in their ability to obtain professional opportunities, by any information that signals their predicament, and their ability to perform even when they attain them. My dissertation, therefore, identifies two consequences of financial standing, decrements in the ability and opportunity to perform at work, that can present barriers to individuals attempting to improve their situation, and thus, contributes theoretically and empirically to developing a more complete understanding of the barriers associated with social mobility.

A final implication of these three essays is that an organizational perspective to personal finance can provide important insights to current policy debates. With increasing public attention

to economic inequality, wage policies, health insurance, and student debt, these essays can inform these policy debates by, for example, illustrating an economic rationale for increasing the minimum wage, mandating the provision of health insurance, and curbing student debt. Furthermore, the findings shed new light on public concern surrounding costs and quality in healthcare and education. If front-line employees in these areas are put in a context that undermines their financial welfare, there can be substantial organizational costs due to the impact of financial worry on their ability to optimally perform their work tasks. Thus, my findings offer a different perspective to these contemporary issues that can be used to guide policy improvements.

ESSAY 1: EMPLOYEE FINANCES AND PERFORMANCE: UNPACKING THE ROLE OF MONEY IN EMPLOYEE PERFORMANCE

ABSTRACT

Drawing on the motivation-ability-opportunity model of employee performance, this essay proposes that money is often viewed as a motivational lever with relatively little attention given to its influence on the latter dimensions. To address this gap in the literature, the current essay outlines how organizational theory can be expanded by moving beyond compensation and incentives to considering employees' financial standing as an antecedent to their ability and opportunity to perform at work. Regarding performance ability, Essay 1 proposes that people in poor financial standing are more inclined to be worried about their finances, which can usurp their cognitive capacity, and consequently spill over into their job performance. This essay further proposes that a person's financial standing can also influence performance opportunities by serving as a cue of competence in selection decisions. Essay 1 concludes with the implications of this perspective for extant research in organizational behavior.

For over 100 years, organizational scholars have conducted research aimed at understanding the factors that enhance or undermine employee performance. From Frederick Taylor (1914) to the present, research has focused on a wide range of performance-enhancing (or inhibiting) factors, ranging from stable individual differences (e.g., Barrick, Mount, & Judge, 2002) to changing weather conditions (e.g., Lee, Gino, & Staats, 2014). Theoretical models of employee performance argue that such factors influence performance through three mechanisms: motivation, ability, and opportunity (Aldag & Brief, 1979; Blumberg & Pringle, 1982; Locke & Latham, 1990; Viteles, 1953). Undoubtedly, the factor that has received the most attention among these streams of research has been the role of money. Indeed, thousands of studies across various social science disciplines have examined the influence of money on performance (see Gerhart & Rynes, 2003; Rynes et al., 2005; Shaw, 2014; Shaw & Gupta, 2015, for reviews). The consideration of money as an influence of performance, however, has been largely limited to how pay or pay differentials can serve as motivational levers (Leana & Meuris, 2015).

This essay aims to build a framework for examining the impact of money on employee performance beyond its influence on motivation. Essay 1 first summarizes the major components of the motivation-ability-opportunity model and how prior research has treated the role of money in each. Subsequently, it proposes that expanding the conceptualization of money beyond employees' compensation and incentives to their financial standing (Leana & Meuris, 2015), which is defined here as their objective financial state, can facilitate a departure from the primary treatment of money as a motivator in organizational theory. Namely, Essay 1 argues that this broader conceptualization can offer a richer perspective where money has a simultaneous impact upon employees' ability and opportunity to perform at work. Afterwards, two conceptual models

are developed that explain the mechanisms through which employees' financial standing can impact their ability and opportunity to perform in their job, followed by a discussion of their implications for organizational research.

1 THE MOTIVATION-ABILITY-OPPORTUNITY APPROACH TO EMPLOYEE PERFORMANCE

Given the competitive advantage associated with a firm's human capital (Barney & Wright, 1998; Pfeffer, 1998), organizational scholars have a longstanding interest in the antecedent conditions to optimizing the performance of their employees. This vast literature has identified numerous antecedents to optimal levels of performance, but each has been posited to affect one or more of the three requisite mechanisms that link them to employee performance: motivation, ability, and/or opportunity (Aldag & Brief, 1979; Blumberg & Pringle, 1982; Latham & Locke, 1990; Viteles, 1953). Motivation, the first mechanism, has been defined as "an unobservable force that directs, energizes, and sustains behavior over time and across changing circumstances" influenced by "factors impacting the direction, effort, and persistence of behavior that are not due to ability or situational forces" (Diefendorf & Chandler, 2010: 66). In general, motivation is believed to be the driving force of performance; without it, people are unlikely to put effort into a task even if they have the ability and opportunity to do so (Ajzen, 1991; Vroom, 1964).

The second mechanism, ability, reflects an individual's knowledge, skills, and abilities relevant to successful task completion (Blumberg & Pringle, 1982; Lawler, 1966; Viteles, 1953; Vroom, 1964). Research focused on employees' ability to perform has identified a variety of factors that influence performance through this mechanism such as their personality

characteristics (Barrick et al., 2001), qualifications (Lawler, 1966), physiological well-being (Blumberg & Pringle, 1982), and available cognitive capacity (Kahneman, 1973). Thus, this mechanism links both stable and mutable individual factors to the internal capacity to perform on a task.

Prior to the motivation-ability-opportunity model, motivation scholars focused primarily on the interaction of ability and motivation (e.g., Lawler, 1966; Vroom, 1964) with less attention offered to factors external to the individual as antecedents of performance (Blumberg & Pringle, 1982). Opportunity refers to "states of nature and the actions of others" that facilitate or constrain a person's task performance (Blumberg & Pringle, 1982: 564). While opportunity has received less attention than the latter mechanisms in the extant literature, some research has demonstrated the importance of opportunity by documenting the impact of environmental constraints such as the availability of requisite technology (Aldag & Brief, 1979), changing procedures (Gilbreth, 1909), the availability of materials and supplies (Dachler & Mobley, 1973), and physical design (Bernstein, 2012) on individual and aggregate performance.

2 THE ROLE OF MONEY IN EMPLOYEE PERFORMANCE

Although prior research has paid considerable attention to the role of money in employee performance (e.g., Deci & Ryan, 1985; Rynes, Gerhart, & Parks, 2005; Shaw & Gupta, 2015), the primary emphasis of this work has been on the motivational component of the motivation-ability-opportunity model (Leana & Meuris, 2015). Indeed, most scholarly discourse within this area has been concerned with contrasting findings on the efficacy of monetary incentives (see Gagné & Deci, 2005; Rynes et al., 2005; Shaw & Gupta, 2015 for reviews). That is, some

research has argued that financial incentives undermine employees' performance (Gagné & Deci, 2005; Ryan & Deci, 2000) because it crowds out their intrinsic motivation (Deci, Koestner, & Ryan, 1999). Concurrently, however, meta-analytic evidence supports a positive effect of financial incentives on performance (Jenkins, Mitra, Gupta, & Shaw, 2011). As a result, Shaw and Gupta (2015) issued a call for moving from a debate focused on the effectiveness of financial incentives on motivation and performance to one centered around their design and implementation.

While motivation is important and necessary for high levels of performance (Ajzen, 1991; Vroom, 1964), employees also require the ability and opportunity to perform in their job (Aldag & Brief, 1979; Blumberg & Pringle, 1982; Locke & Latham, 1990; Viteles, 1953), two dimensions where money has received relatively less consideration. Academic interest in the effect of money on performance ability has paralleled the compensation and incentives literature. That is, scholars have argued that compensation and incentives increase the aggregate knowledge and skills within a firm by attracting better job candidates and retaining high-ability employees (Akerlof, 1984; Cappelli, 1999; Gerhart & Rynes, 2003). Consistent with this argument, there is some empirical evidence that higher levels of pay enhance the aggregate ability of an organization's employees (Brown & Medoff, 1989; Gerhart & Milkovich, 1990). Holzer (1990), for example, found that higher wages enhance the ease of recruiting quality replacements for leavers. Similarly, Steele, Murnane, and Willett (2010) demonstrate that incentivizing less desirable teaching positions increases the attraction of high ability teachers.

Research on the role of money in performance opportunity, in contrast, has focused more broadly on socio-economic status (SES), of which household income is a primary component and often-used proxy (Côté, 2011; Leana & Meuris, 2015). Network studies have found that

people with higher SES tend to have access to more social resources within their network, which offer them an advantage over people from lower socio-economic backgrounds (Campbell et al., 1986; Lin, 1999; Lin & Dumin, 1986). Overall, this literature suggests that as a person has more money, they tend to have access to more social resources, which facilitate the availability of performance opportunities.

3 EXPANDING THE CONCEPTUALIZATION OF MONEY IN EMPLOYEE PERFORMANCE

The current essay aims to develop a broader organizational perspective on the effect of money on performance by departing from the conventional conceptualization of money as compensation and incentives and adopting a broader perspective that incorporates employees' financial standing. This conceptualization considers the total monetary resources that employees have at their disposal, including their savings, credit availability, and total household income. While income serves as the primary monetary resource that people draw upon to access goods and services, savings also contribute to an individual's financial standing by offering a buffer in case expenses exceed one's total income (Chase, Gjertsen, & Collins, 2011). When expenses exceed people's income and savings, they can also call upon consumer debt to meet their needs, serving as the final layer of a person's financial standing. Thus, while compensation serves as a component of employees' financial standing by contributing to their household income, their financial standing represents a broader construct that captures the resources they have at their disposal to meet their expenses.

Beyond their financial standing, employee behavior may further be affected by their subjective construal of it. As Kahneman and Tversky observe, "the same level of wealth may imply abject poverty for one person and great riches for another" (1979: 277). Differences between absolute circumstances and subjective construal have long been recognized by research on relative deprivation, the phenomenon in which a person's evaluations of her current situation are not monotonically related to the objective situation (e.g., Crosby, 1976). The growing literature and debate on income and happiness also implicitly acknowledges the distinction between people's financial standing and their subjective appraisal of it. Hagerty (2000), for example, found that the effect of income on subjective well-being is socially construed, such that one's satisfaction with income level is, in part, dependent upon social comparisons within a community. Smith, Diener & Wedell (1989) report similar findings in experimental studies. Due to the variance in the subjective appraisal of people's financial standing, they also differ in their experience of financial worry, defined here as the extent to which they are concerned with their financial standing. Thus, the impact of a person's financial standing on employee behavior can be examined from both an objective and subjective perspective.

This essay posits that this broader conceptualization of money offers a means of expanding how money is viewed in employee outcomes beyond its role as a motivational lever. Specifically, while money conceptualized as pay is considered to primarily affect performance through enhancing motivation, the broader conceptualization of money as a person's financial standing provides a pathway of theorizing how it can concurrently be a direct antecedent of employees' ability and opportunity to perform. As such, the proceeding sections of this essay develop two conceptual models outlining the mechanisms underlying the potential effect of employees' financial standing on their ability and opportunity to perform at work.

4 FINANCIAL STANDING AND PERFORMANCE ABILITY

To better understand the impact of employees' financial standing on their ability to perform at work, this essay draws upon emerging research in psychology and economics (e.g., Mani et al., 2013; Mullainathan & Shafir, 2013; Shah et al., 2012) suggesting that scarcity affects people's cognitive ability. As Mani et al. (2013) and others have argued, scarcity can impose a cognitive "tax" in the form of an unwelcome distraction to other necessities of one's life. Meuris and Leana (2015: 147) have further noted that employees who are worried about their financial standing "do not take the metaphorical 'backpack' of scarcity off their shoulders when they come into work; instead, it is carried with them as they complete their work tasks as a competing demand for mental bandwidth." These financial concerns can be particularly salient at work. For most, their financial standing is dependent upon remuneration for performing a job, as paid employment ensures the attainment and maintenance of material resources and financial stability. When people have financial concerns, they tend to feel economically dependent on their jobs for their survival (Brief et al., 1997), which heightens the salience of these concerns in the workplace because one's finances are inextricably linked to one's work. Indeed, prior research suggests that people's work attitudes are influenced by their degree of financial dependency on their jobs (Brett, Cron & Slocum, 1995; Doran, Stone, Brief & George, 1991). Thus, the ties between employees' financial standing and their jobs, especially among people who do not have sufficient resources (Brief et al., 1997), can lead financial concerns to be particularly salient at work.

Accordingly, employees' financial worry may undermine their ability (versus motivation) to perform at work by drawing their attention away from work-related to finance-related concerns. Figure 1 demonstrates the proposed mechanisms underlying a relationship between

people's financial standing and their job performance. Here, financial worry is hypothesized to mediate the relationship between employees' financial standing and their cognitive capacity. Financial worry can undermine cognitive capacity through two mechanisms: (a) financial worry usurps cognitive resources by attracting attention and (b) financial worry increases the frequency of emotional suppression. Finally, reductions in cognitive capacity are proposed to mediate the relationship between financial worry and job performance.

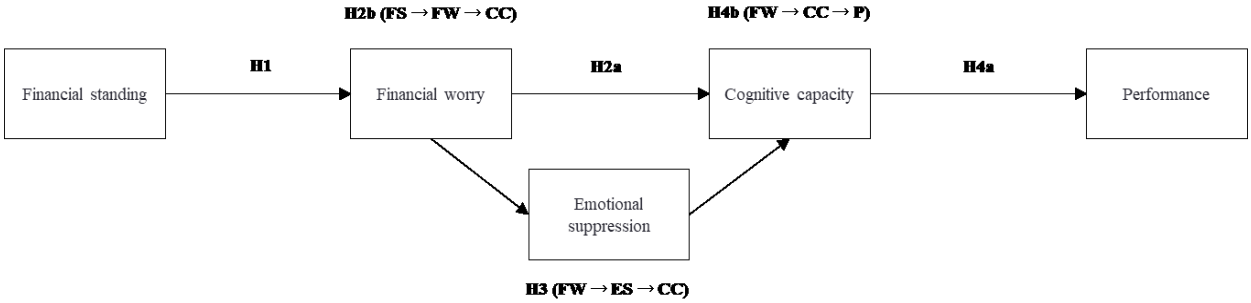

Figure 1. *Conceptual model for the impact of a person's financial standing on performance ability*

4.1 Financial standing and worry

When people are in poor financial standing, they are apt to worry about their situation because it presents a threat to the well-being of themselves and their dependents. More specifically, people strive to attain and retain valuable resources, and become worried when they have insufficient resources to meet their needs and obligations (Ennis et al., 2000; Hobfoll, 1989, 2001).

Kahneman and Deaton (2010), for instance, report a positive relationship between household income and well-being, at least for those with annual incomes in the lower three quintiles of the population. Other scholars (e.g., Kushlev, et al., 2015; Ünal-Karagüven, 2009) have found a significant negative relationship between income and felt anxiety, as well as other negative, but not positive, emotions. Taken together, these studies suggest that, although financial worry is distinct from one's financial standing (Ackerman & Paolucci, 1983; Leana & Meuris, 2015), decreases in financial standing are often accompanied by an increased propensity to be worried, as economic shocks will tend to be more frequent and/or impactful with limited money at one's disposal.

Hypothesis 1. Financial standing is negatively related to financial worry.

4.2 The effect of financial worry on employees' cognitive capacity

Emerging research in psychology and behavioral economics has argued that people concerned with their financial standing tend to ruminate on it, which inadvertently restricts their cognitive processing to focus on stimuli related to their finances (Mani et al., 2013; Mullainathan & Shafir, 2013). These arguments draw upon resource models of cognition (Baddeley, 1992; Baddeley & Hitch, 1974; Kahneman, 1973; Miller, 1956; Norman & Bobrow, 1975), which posit that people have a finite capacity to heed and process information. As they become worried about their financial standing, they tend to focus on stimuli relevant to averting the immediate threat (Staw, Sandelands, & Dutton, 1981). Increased attention to one's financial standing can be adaptive to managing one's predicament (Shah et al., 2015), but this focus simultaneously leaves fewer cognitive resources available for other necessities due to the limited capacity of the working

memory system. This phenomenon is referred to as the "tunneling effect" whereby people tend to neglect information unrelated to their immediate source of concern.

The tunneling effect has received some empirical support in recent years. Mani et al. (2013), for instance, found that farmers performed worse on cognitive tests before the harvest, when their financial standing were depleted, compared to after the harvest, when they were relatively well off. Another of their experiments found that merely priming perceived financial scarcity decreased performance on cognitive tests, with a larger effect than the loss of one night's sleep. Consistently, Essay 1 hypothesizes that employees who are worried about their financial standing will have less cognitive bandwidth available to them because such worry restricts their information processing and appropriates working memory – defined as "a brain system that provides temporary storage and manipulation of the information necessary for such cognitive tasks as language comprehension, learning, and reasoning" (Baddeley, 1992: 556). Carvalho, Meier, and Wang (2016) provide some evidence for this Hypothesis. Their analyses suggest that changes in financial standing (i.e., before vs. after a payday) only influence cognitive functioning when people differed in their subjective assessment of their financial standing.

Hypothesis 2a. Financial worry is negatively related to cognitive capacity.

Hypothesis 2b. Financial standing has an indirect effect on cognitive capacity through financial worry.

4.3 The indirect effect of emotional suppression on working memory

While scholars have focused on the tunneling effect as the primary psychological mechanism linking financial worry and cognition, prior research has also shown that financial worry tends to be accompanied by anxiety and other forms of negative affect (e.g., Andrews & Wilding, 2004;

Haushofer & Fehr, 2014; Ünal-Karagüven, 2009), which people regulate to avert interference with their lives (Meuris & Leana, 2015). Indeed, in anticipation of undesirable consequences from these negative emotions for the achievement of their personal and professional goals (e.g., Andrade & Ariely, 2009), people are motivated to suppress them (Gross, 2002). As suppression becomes more frequent over time, however, it increasingly taxes an individual's cognitive capacity (Muraven & Baumeister, 2000) because emotional regulation typically requires considerable cognitive effort (Richards & Gross, 2000).

Given the extant evidence for a positive relationship between financial worry and negative emotions (Haushofer & Fehr, 2014; Kushlev, et al., 2015), and emotional suppression and cognitive effort (Goldin, McRae, Ramel, & Gross, 2008; Richards & Gross, 2000), this essay hypothesizes that the frequency of emotional suppression provides an additional mechanism through which financial worry can usurp an employee's cognitive capacity, parallel to the tunneling effect described in prior research. That is, in organizational settings, employees are not only motivated to suppress their negative emotions in interpersonal interactions, as demonstrated by prior research in customer service contexts (see Elfenbein, 2007 for review), but may also suppress them as a means of avoiding interference with their personal and professional goals, even in contexts where they are not directly dealing with customers. While the tunneling effect described earlier reflects an attentional process whereby finance-related thoughts appropriate cognitive resources (Mani et al., 2013; Mullainathan & Shafir, 2013; Shah et al., 2012), emotional suppression is a self-regulatory process whereby cognitive resources are drained over time due to the regulation of emotional experiences and displays (Gross, 2002; Muraven & Baumeister, 2000). Both mechanisms can simultaneously decrease cognitive capacity, albeit through distinct psychological processes. This dual mechanism approach is consistent with

contemporary approaches to cognitive functioning where attention, memory, and executive control are independent functions that draw from the same pool of cognitive resources (e.g., Vallat-Azouvi, Pradat-Diehl, & Azouvi, 2012).

Hypothesis 3. Financial worry has an indirect effect on cognitive capacity through the frequency of emotional suppression.

4.4 Spillover effect of financial worry on work performance

If employees' financial worry tends to decrease their cognitive capacity, as has been argued here, it should spill over into their ability to perform in their jobs. Financial concerns serve as baggage that people carry with them into the workplace (Meuris & Leana, 2015). When employees are focusing on their financial concerns and regulating the resultant negative emotions, their job performance can falter because they have less attention and information-processing power to devote to work-related tasks (Smallwood & Schooler, 2006). Indeed, decreases in spare cognitive capacity can lead to cursory attention to tasks or concerns that are outside of its scope, including work tasks (Kahneman, 1973; Lavie et al., 2004). Thus, this essay hypothesizes that financial worry has an indirect negative effect on job performance through its dampening effect on cognitive capacity.

Essay 1 proposes an indirect rather than a direct negative relationship between financial worry and job performance for two reasons. First, as discussed, prior research has established a negative relationship between financial worry and cognitive capacity. It is argued here that it is this decrement in cognitive capacity that undermines the ability of employees to perform at work. Second, while financial worry can undermine cognitive capacity and thus performance ability, some authors have argued that financial worry could also potentially enhance work

motivation if employees devote more effort toward securing their jobs and avoiding loss (Brockner & Higgins, 2001; Higgins, 1998; Idson, Liberman, & Higgins, 2000) and/or attaining any performance incentives that may reduce their insufficiency (Shoss & Probt, 2012). This potential motivation "bump" may suppress the negative relationship between financial worry and performance due to ability decrements because of the differences in effect signs (see Rucker, Preacher, Tormala & Petty, 2011). For this reason, the theory does not predict a direct relationship between financial worry and performance. Instead, it is hypothesized that financial worry and work performance is an indirect-only relationship (Zhao, Lynch, & Chen, 2010), whereby financial worry depresses cognitive capacity, which, in turn, results in lower job performance.

Hypothesis 4a. Cognitive capacity is positively related to job performance.

Hypothesis 4b. Financial worry has a negative indirect effect on work performance through cognitive capacity.

4.5 Summary

In the previous sections, this essay proposes that employees' financial standing can affect their ability to perform at work by reducing the cognitive capacity they are able to devote towards their work tasks. More specifically, people who are in poor financial standing tend to become worried about their finances to the detriment of their cognitive capacity. Financial worry can undermine cognitive capacity because people ruminate upon their financial concerns, but also due to increases in the frequency of suppressing negative emotions. By reducing people's cognitive capacity, employees' financial standing and financial worry spills over into the workplace to the detriment of their performance. Collectively, the theory developed here

regarding the impact of financial standing on performance ability regarding suggests that there can be considerable organizational costs to having employees in poor financial standing.

5 FINANCIAL STANDING AND PERFORMANCE OPPORTUNITY

This essay further posits that employees' financial standing can have consequences for the opportunities they are selected for because information indicative of one's financial standing may be used in the formation of competence evaluations. That is, organizational decision-makers may over-attribute a person's financial standing to his or her dispositional competence even when there are potential external reasons explaining the nature of their financial standing. Competence evaluations, influenced by a person's presumed financial standing, subsequently, could affect the performance opportunities organizational decision-makers offer, as decision-makers elect to exclude a candidate in poor financial standing from valued opportunities while favoring candidates in a good financial standing (Cuddy, Glick, & Beninger, 2011).

Drawing from attribution theory (e.g., Heider, 1958; Kelley, 1967; Jones, 1990; Ross, 1977) and psychological theories of social evaluation (e.g., Cuddy, Fiske, & Glick, 2007; Cuddy et al., 2011), this essay posits a relationship between a person's financial standing and the likelihood of selection for valued professional opportunities mediated by decision-makers' evaluations of their overall competence (see Figure 2). This relationship, however, may be strengthened or attenuated by four boundary conditions: decision-makers' lay beliefs, decision-makers' prevention focus, the candidate's socio-economic background, and the candidate's task experience. The following sections first describe the rationale for the indirect relationship between a person's financial standing and selection for a professional opportunity mediated by

its effect on evaluations of a candidate's competence followed by a discussion of each boundary condition depicted in Figure 2.

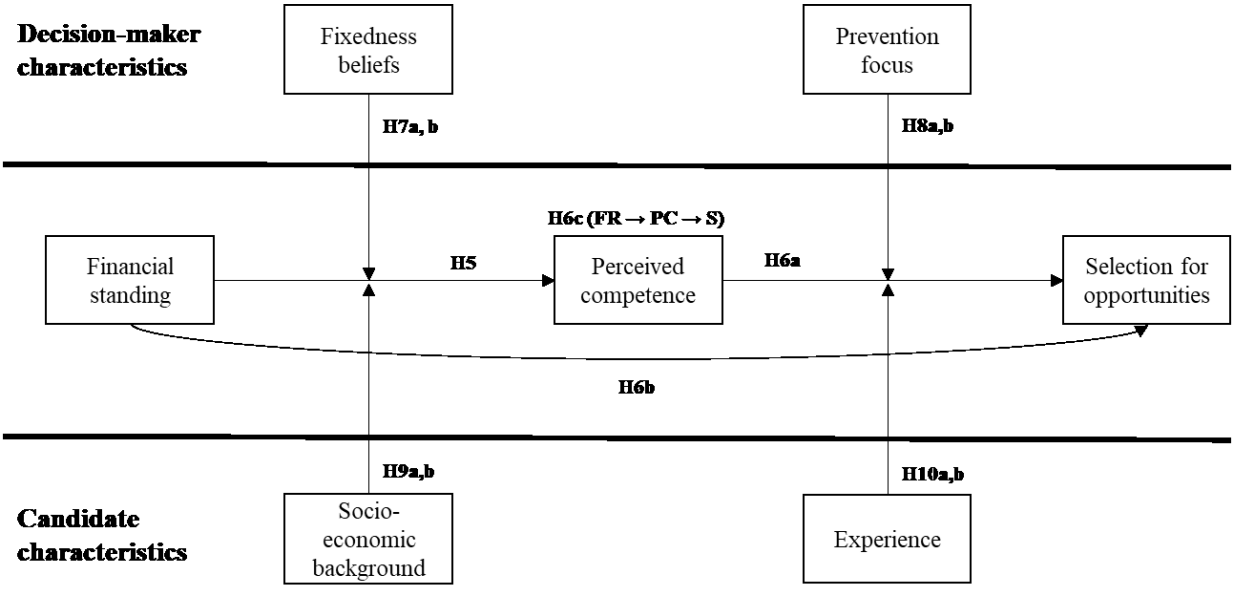

Figure 2. *Conceptual model for the impact of a person's financial standing on performance opportunity*

5.1 Financial standing and perceptions of competence

The subjective construal of another's behavior, and the resultant attributions, have been longstanding topics of interest since the beginnings of social psychology (Heider, 1958; Ichheiser, 1949; Jones & Harris, 1967; Lewin, 1931; Ross, 1977). Much of this work has centered around how people make causal inferences. People are posited to attribute internal or external causes to a behavior or outcome based upon its perceived covariation with the person or situation (see Malle, 2011 for review), which is informed by evaluators' expectations within the

given context (Gilbert & Malone, 1995; Kelley, 1967). Although a person's financial standing can be attributed to both internal and external causes, people may over-attribute it to internal causes because they underweight the influence of external events on personal finances (Cooper & Olson, 2015). This proposition is consistent with a vast literature on the fundamental attribution error or correspondence bias documenting the inclination to overemphasize internal explanations for others' behavior (e.g., Gilbert & Malone, 1995; Harvey, Town, & Yarkin, 1981; Heider, 1958; Jones, 1990; Moore, Swift, Sharek, & Gino, 2010; Nisbett & Borgida, 1975; Nisbett & Ross, 1980; Ross, 1977), which has been argued to have an evolutionary basis (Andrews, 2001) and found across cultures (Krull et al., 1999).

If people are apt to make an internal attribution of others' financial standing, it can subsequently impact their judgments of a person (Fiske, 1992; Fiske et al., 2002). A broad literature has argued that such social judgments are based on two dimensions: competence and warmth (Abele et al., 2008; Cuddy et al., 2011; Fiske et al., 2002; Fiske et al., 2007; Rosenberg, Nelson, & Vivekananthan, 1968). Whereas competence reflects a person's perceived knowledge, ability, and skills, warmth reflects her likability and trustworthiness (Fiske et al., 2002). Building upon these studies, this essay proposes a relationship between a people's financial standing and their perceived competence. Some research on the evaluations of people in poverty supports this proposition. Fiske et al. (2002), for example, report that participants in their experiments viewed the poor as less competent, but warmer, than others. Similarly, Cozzarelli et al. (2001) found that internal attributions of poverty tend to be endorsed more frequently than other explanations. At the same time, they, and others (e.g., Belmi & Neale, 2014; Feather, 1974; Kraus, Piff, & Keltner, 2009; Wilson, 1996; Zucker & Weiner, 1993; Weiner, Osborne, & Rudolph, 2010), have also identified several moderating factors, including raters' demographic characteristics,

held values, and political ideologies, which can increase the consideration of external causes for poverty.

While this research suggests that the poor are often viewed as less competent than people in the middle-class, little work in this domain has examined how financial standing in itself can have consequences for how people view a person and her abilities. More specifically, poverty combines a poor financial standing with a stigmatized status (Côté, 2011; Fiske et al., 2002; Kraus et al., 2012), which is markedly different from people who are not in poverty but still experience scarcity (Leana & Meuris, 2015). Indeed, poverty creates a frame of reference through which people view the world, and thus is not limited to one's financial standing (Kraus et al., 2012). Therefore, it is hypothesized that decision-makers will tend to over-attribute employees' financial standing to internal causes, which subsequently, impacts their competence evaluations.

Hypothesis 5: Financial standing is positively related to perceived competence.

5.2 Financial standing and selection for performance opportunities

Information suggestive of a person's financial standing can become salient throughout the selection process. This information can come from direct sources, such as the use of credit reports during hiring (Weaver, 2015), or more implicitly, such as the type of car an applicant drives (Gino & Pierce, 2010) or the neighborhood they live in (Bertrand & Mullainathan, 2004). When decision-makers attend to this information, the tendency to over-attribute internal causes to a person's financial standing may influence their selection decisions by coloring their competence evaluations. As Moore et al. (2010: 843) argue, "attribution is crucial to all types of personnel selection decisions, from admitting applicants to picking teammates." Indeed, a

considerable literature has documented the importance of attributions in selection for professional opportunities (see Knouse, 1989 for review).

Given the potential relationship between financial standing and perceived competence, proposed earlier, information suggestive of the person's financial standing may influence the selection opportunities a person receives, such as jobs, leadership positions, desirable team assignments, or promotions (Baskett, 1973; Cuddy et al., 2011; Hinds, Carley, Krackhardt, and Wholey, 2001). According to the *Behaviors from Intergroup Affect and Stereotypes* (BIAS) map (Cuddy et al., 2007), perceived incompetence elicits "passive harm" behaviors aimed at distancing oneself from people that exhibit the characteristics associated with low competence. Conversely, perceived competence elicits "passive facilitation" behaviors whereby a person associates herself with highly competent others. Cuddy, Norton, and Fiske (2005), for example, found that perceptions of competence are correlated with social exclusion. Similarly, Becker and Asbrock (2012) report that when the salience of competence exceeded the salience of warmth among senior citizens, people endorse more exclusionary behavior directed toward them. The tendency to select a person based on their financial standing due to its impact on their perceived competence is consistent with this theory, as people should be motivated to distance or align themselves, their teams, and their organizations based upon competence evaluations informed by cues of candidates' financial state.

Hypothesis 6a: Perceptions of competence are positively related to the probability of selection for a performance opportunity.

Hypothesis 6b: Financial standing is positively related to the probability of selection for a performance opportunity.

Hypothesis 6c: The relationship between financial standing and the probability of selection for a performance opportunity is mediated by perceptions of competence.

5.3 The moderating influence of lay beliefs regarding the fixedness of dispositions

A substantial body of research suggests that people differ in their lay beliefs of the malleability of dispositional attributes (Dweck, 2008; Ross & Nisbett, 1991) and that these beliefs have important consequences for a person's social judgments, behavior, and task performance (e.g., Chiu et al., 1997; Dweck, 1999; Kray & Haselhuhn, 2007; Molden & Dweck, 2006). Consistent with this literature, this essay posits that organizational decision-makers who strongly believe that traits are fixed (i.e., entity theorists) are more likely to over-attribute internal causes to a person's financial standing because they "view the task of person perception as being to judge or diagnose underlying traits from the available behavioral information" (Chiu et al., 1997: 20). Entity theorists further tend to hold the belief that behavior is consistent across situations (Kunda & Nisbett, 1986) so that a person's financial standing is more likely to be extrapolated as indicative of behavior in other domains, which enhances the likelihood of making internal causal attributions (Kelley, 1967). Decision-makers with a strong belief in the fixedness of dispositions should thus be more apt to view a person's financial standing as indicative of his or her overall competence. As a result, it is hypothesized that the relationship between financial standing and perceived competence is moderated by lay beliefs about the fixedness of dispositions so that people who subscribe to a fixed view of dispositions (i.e., entity theorists) are more likely to attribute financial standing to a person's competence, which strengthens the influence of financial standing on selection for performance opportunities.

Hypothesis 7a: The positive relationship between financial standing and perceptions of competence is moderated by decision-makers' lay beliefs such that the relationship is stronger as decision-makers' belief in the fixedness of dispositions increases.

Hypothesis 7b: The indirect positive relationship between financial standing and probability of selection for a performance opportunity is moderated by decision-makers' lay beliefs such that the indirect relationship is stronger as decision makers' belief in the fixedness of dispositions increases.

5.4 The moderating influence of prevention focus

Research on regulatory focus suggests that financial standing may be more influential in selections decisions when decision-makers are prevention focused. Regulatory focus refers to an individual difference in people's orientation towards the promotion of positive outcomes or the prevention of negative outcomes (Higgins, 1998; Higgins, Roney, Crowe, & Hymes, 1994). Crowe and Higgins (1997), for instance, found that participants with a promotion focus had a risky response bias, while participants with a prevention focus had a conservative response bias when making decisions. Brockner and Higgins (2001) further argue that regulatory focus impacts the nature and magnitude of emotions, and thus, shapes the goals that people set and reactions to goal attainment.

Following this line of research, it is hypothesized that decision-makers with a prevention focus are more inclined to exclude candidates in poor financial standing and favor candidates in good financial standing because competence evaluations are more influential in their selection decisions, as they are more oriented toward avoiding bad selection decisions. Indeed, as Crowe and Higgins (1997: 120) note, "individuals in a state of vigilance from a prevention focus should

want, especially, to attain correct rejection and avoid errors of commission (i.e., making a mistake)." Therefore, prevention focus may moderate the indirect relationship between financial standing and selection by impacting the path between perceived competence and the probability of selection. That is, decision-makers with a prevention focus may be more inclined to exclude a candidate from consideration when she is in poor financial standing because it casts uncertainty over her competence, which prevention-oriented decision-makers are more likely to act upon in their selection decisions. At the same time, prevention-oriented decision-makers may favor a candidate in good financial standing because their selection is perceived as less likely to result in negative outcomes given their higher evaluations of competence.

Hypothesis 7a: The positive relationship between perceptions of competence and selection is moderated by prevention focus such that the relationship is stronger as decision-makers' prevention focus increases.

Hypothesis 7b: The indirect positive relationship between financial standing and selection is moderated by prevention focus such that the indirect relationship is stronger as decision makers' prevention focus increases.

5.5 The moderating influence of candidate socio-economic background

Although financial standing is often considered as synonymous with socio-economic background (Côté, 2011), their effects can be quite different from each other (Leana & Meuris, 2015). A study by Kish-Gephart and Campbell (2015) offers one example of this distinction. They find that executives' decisions were riskier if they came from upper compared to lower socio-economic background, which suggests that executives' socio-economic background had an impact on their behavior independent of their current financial standing. Since a person's socio-

economic background can be congruent or incongruent with their current financial standing, information regarding candidates' socio-economic background may mitigate or enhance the indirect relationship between financial standing and selection by impacting decision-makers' expectations and resultant attributions.

Classic research conducted by Kelley (1967) argued that internal attribution is most likely to occur under high consistency of behavior across situations, low distinctiveness of behavior to the situation, and low consensus of behavior within the situation. Applied to one's financial standing, internal attribution should be most likely when a person consistently is in poor or good financial standing and her financial standing differs from that of her peers. Information suggestive of a person's socio-economic background may impact the consensus dimension in Kelley's (1967) model, and consequently, enhance or diminish the likelihood that decision-makers will attribute candidates' personal finances to their competence. That is, candidates from a low socio-economic background may be less likely to have their poor financial standing attributed to their competence because there is a salient alternative explanation for their predicament as most in their situation are expected to have limited financial standing. Conversely, high socio-economic backgrounds may have the opposite effect where candidates are more likely to have a poor financial standing internally attributed because their financial standing defies the general expectation that those from well-to-do backgrounds should be in good financial standing. Therefore, it is hypothesized that a candidate's socio-economic background moderates the indirect relationship between financial standing and selection by influencing the effect of financial standing on perceptions of competence.

Hypothesis 8a: The positive relationship between financial standing and perceptions of competence is moderated by candidate socio-economic background such that the relationship is weaker for candidates from low socio-economic backgrounds.

Hypothesis 8b: The positive indirect relationship between financial standing and selection is moderated by candidate socio-economic background such that the indirect relationship is weaker for candidates from low socio-economic backgrounds.

5.6 The moderating influence of an experience advantage

The final contextual condition that may influence the relationship between a candidate's financial standing and his or her probability of selection for a valued opportunity is an experience advantage over other candidates because decision-makers may anticipate the benefits of task experience for performance. In general, candidates who have experience with the task a team or organization is selecting for should be preferred over candidates with no experience (Cialdini, 2001; French & Raven, 1959; Rynes, Orlitzky, & Bretz, 2007) because it increases the probability of performance, and consequently, positive outcomes for the decision-maker. Indeed, task experience has been tied to higher levels of performance across a variety of contexts (e.g., Dane, Rockmann, & Pratt, 2012; List, 2003; Staats & Gino 2012). Therefore, experience may moderate the hypothesized indirect effect between financial standing and selection because it reduces the relationship between competence evaluations and selection. Namely, although a candidate in poor financial standing may still be evaluated as less competent, decision-makers may place less weight upon this evaluation in anticipation of the benefit associated with task experience for performance. As such, it is hypothesized that an experience advantage over other

candidates reduces the impact of perceived competence in selection, and in doing so, attenuates the influence of financial standing on the probability of selection for performance opportunities.

Hypothesis 9a: The positive relationship between perceptions of competence and selection is moderated by relative experience so that the relationship becomes weaker as the experience of the candidate relative to others increases.

Hypothesis 9b: The indirect positive relationship between financial standing and selection is moderated by relative experience so that the indirect relationship becomes weaker as the experience of the candidate relative to others increases.

5.7 Summary

The previous section proposed that money can play a direct role in performance opportunity because decision-makers are apt to internally attribute a candidate's financial standing. Financial standing, therefore, can constrain or facilitate selection for a performance opportunity because of its impact on decision-makers' evaluations of a candidate's competence. These relationships are proposed to vary based upon decision-makers' lay beliefs and regulatory focus as well as the candidate's socio-economic background and task experience. Overall, the hypothesized effects suggest that employees in poor financial standing may be stymied in their career progression by the attributions that others make of their predicament.

6 DISCUSSION

Prior research has identified numerous antecedents to employee performance, ranging from stable dispositions (e.g., Judge et al., 2002) to various environmental factors (e.g., Lee et al., 2016). Many scholars in this domain have been particularly interested in the role that money plays in encouraging job performance. While theoretical models have argued that antecedents affect employee performance through its effect on their motivation, ability, and opportunity (e.g., Aldag & Brief, 1979; Blumberg & Pringle, 1982; Locke & Latham, 1990), much of this research has focused on the role of money in undermining or enhancing their motivation. To expand the consideration of money in employee behavior within organizational science, this essay proposed moving beyond the conceptualization of money as compensation and incentives to people's financial standing and their subjective appraisals of it. Namely, employee behavior is not solely affected by the pay schemes they work under, but also by the state of their personal finances.

This essay drew upon this broader conceptualization of money to argue that money not only affects employee performance through motivation, as argued by the extant literature, but also impacts performance through its effect on their ability and opportunity. Subsequently, two conceptual models were developed that link employees' financial standing to their ability and opportunity to perform at work. Specifically, when people are in poor financial standing, they are more likely to worry about their finances, which depletes their cognitive capacity (Mani et al., 2013; Mullainathan & Shafir, 2013). Due to its effect on cognitive capacity, an employee's financial standing can spill over into organizational functioning by diminishing his or her ability to perform at work. Moreover, financial standing can also influence performance opportunity by impacting selection decisions. Being in poor or good financial standing can be attributed to

internal causes, which conversely, can undermine or enhance the perceived competence of a candidate and the probability of selection for valued professional opportunities.

The arguments put forth in this essay offer several important contributions to organizational theory and behavioral science. First, the proposed relationships expand existing research linking money to employee performance. Drawing on the motivation-ability-opportunity framework (e.g., Blumberg & Pringle, 1982), this essay argued that organizational research has traditionally viewed money as a motivational lever in employee behavior (e.g., Shaw & Gupta, 2015; Jenkins et al., 1998; Rynes et al., 2005; Shaw, 2014). By moving from a primary treatment of money as compensation and incentives to a broader conceptualization that incorporates their financial standing, Essay 1 expands theory in this domain by outlining how money also plays a direct role in employees' ability and opportunity to perform at work. As such, the propositions offered in this essay answer Leana and Meuris's (2015) call to develop theory regarding the consequences of employees' financial standing for organizational outcomes.

Second, considering that finances are a source of significant concern for a considerable proportion of the population in many developed economies (e.g., APA, 2015; Desilver, 2014; Federal Reserve Board, 2015), the arguments put forth in this essay suggest that firms have an interest in the financial standing of their employees and can benefit from taking steps to improve the financial standing of their employee population. That is, companies that help employees improve their financial standing are less likely to experience the performance losses from the effect of financial worry on performance ability (Meuris & Leana, 2015). Moreover, companies that orient themselves towards helping people maintain financial wellness rather than exclude them from professional opportunities can attract potential star employees overlooked by other organizations. Relatedly, while employee compensation and benefits are often approached from

a competitive lens (Pfeffer, 2010), fueled by the increasing prominence of economic and finance in organizational decision-making (Davis, 2009; Ferraro, Pfeffer, & Sutton, 2005), the arguments presented in this essay suggest that organizations should consider them as a potential for mutual benefit.

Finally, this essay builds on prior research in psychology and economics to expand the behavioral model of financial scarcity, which suggests that a poor financial standing has psychological consequences that disadvantage those who experience it (Bertrand et al., 2004, 2006; Vohs, 2013). Specifically, this essay proposes that being in poor financial standing can lead to a professional disadvantage by impacting people's ability and opportunity to perform at work. Whereas prior research has focused on the direct cognitive consequences of financial scarcity (see Mullainathan & Shafir, 2013 for review), the arguments outlined here expand the behavioral model of scarcity by introducing research on emotional regulation, social judgments, and organizational outcomes to this domain. Thus, the propositions of this essay offer a theoretical bridge between this emerging work in psychology and economics and extant research in social psychology and organizational science.

7 CONCLUSION

Employee performance has been of longstanding interest to organizational scholars. Drawing upon the ability-motivation-opportunity model of employee performance (e.g., Aldag & Brief, 1979; Blumberg & Pringle, 1982), Essay 1 argues that the extant literature on performance tends to view money as a motivational lever (Leana & Meuris, 2015). While it undoubtedly can be important to employee motivation (Shaw & Gupta, 2015), this essay proposes that money may

also play a part in employees' ability and opportunity to perform. That is, when employees are in poor financial standing, they are more likely to worry about their finances, which can undermine their cognitive capacity (e.g., Mullainathan & Shafir), and as a result, their work performance. Furthermore, financial standing may impact performance opportunities by serving as social information that leads organizational decision-makers to exclude or favor certain candidates for valued positions. Overall, the theory put forth in this essay offers a framework for expanding the role of money in employee behavior beyond motivation by conceptualizing money as a person's financial standing.

ESSAY 2: THE PRICE OF POOR FINANCIAL STANDING: FINANCIAL WORRY AS A BARRIER TO PERFORMANCE ABILITY

ABSTRACT

This essay examines the influence of a person's financial standing and worry on his/her ability to perform at work. As companies have increasingly relied on work practices that promote financial uncertainty and shift risk from the employer to employees, an environment has been created where financial worry is becoming increasingly common. Two studies show that people who are worried about their financial standing have higher loads on their cognitive capacity, which subsequently spills over into their task performance. Study 1 demonstrates this relationship in a field study with short-haul truck drivers which combined survey responses with lagged archival data on preventable accidents. Study 2 establishes the causal ordering among the variables by manipulating financial worry, confirming its relationship with performance through increases in cognitive load. This essay discusses the implications of the research findings for organizational theory and workplace practice, arguing for enhanced attention to employee financial well-being.

Financial worry is a growing concern for many, even in developed economies. In the United States, for example, a report by the American Psychological Association (2015) revealed that money-related concerns are a more prevalent source of distress than those related to health, work, or family. Indeed, nearly two-thirds of the U.S. population report being worried about their financial standing. Data from the Federal Reserve Board (2015) confirm these findings by showing that most people across the age spectrum do not have $400 in savings to cover an emergency nor believe they have sufficient savings to retire.

These trends in personal finance have increasingly entered the public discourse in policy debates surrounding economic inequality, minimum wages, and healthcare costs. At the same time, a literature has emerged in organizational science suggesting the role of employing organizations in creating a context for individual financial concerns. As Bidwell, Briscoe, Fernandez-Mateo, and Sterling (2013) document, organizations have increasingly relied upon the use of contingent workers, layoffs, variable pay systems, and variable scheduling, which have coincided with increases in individual financial worry. Cobb (2015) further describes how U.S. companies have diminished their offerings of defined benefit plans in favor of defined contribution accounts, effectively shifting the financial risk of retirement onto individual employees. Even when employees receive such benefits, employers have increasingly limited their contributions while employees' share of costs has increased (Claxton et al., 2015). These changes have obvious short-term financial benefits for the firm and are often marketed as beneficial to employees by enhancing individual choice, but such practices may simultaneously increase employees' financial concerns by introducing economic uncertainty into their lives.

Financial worry can impose a significant burden on individuals, their families, and entire communities. There is a large body of research showing the detrimental effects of being in poor

financial standing on a variety of individual and collective outcomes such as individual physical and psychological health (Belle Doucet, 2003; Galea et al., 2007), family well-being (Benson, Fox, DeMaris & Van Wyk, 2003; Voydanoff, 1990), and community cohesion (Small and Newman, 2001). At the same time, little work has examined how people's financial concerns affect the organizations that employ them (Meuris and Leana, 2015). This omission is notable given the role that firms can play in facilitating – or undermining – financial wellness through their human capital strategies (Davis, 2009; Lambert, 2008). Compensation practices, for instance, determine the monetary resources employees have to meet their needs, and the predictability of these resources; while benefits, ranging from retirement savings matches to health programs, can remove barriers to being in good financial standing that may otherwise be burdensome (Meuris and Leana, 2015; Pfeffer, 2010). Thus, employers can play a vital role in influencing employees' financial standing.

This essay offers several contributions to the literature. First, it investigates the organizational costs of employees' personal finances and demonstrates how employees' financial standing and financial worry can have a reciprocal negative influence on valued organizational outcomes. Organizations contribute to employees' financial standing through their wage setting, benefits, and work arrangements, yet these practices are often approached as a competitive process (win-lose) between the employer and its employees (Gittell, Von Nordenflycht, & Kochan, 2004; Pfeffer, 2010). The studies described in this essay suggest that discussion regarding these practices can be approached in a more cooperative fashion. In this regard, the studies offer empirical evidence for employers' interest in the financial standing of their employees.

More broadly, this research expands the reach of theory regarding the role of money in organizational behavior. Models of employee performance generally assert that employees need motivation, ability, and opportunity to be highly effective in their jobs (Aldag & Brief, 1979; Blumberg & Pringle, 1982; Vroom, 1964). Historically, however, the role of money in performance has been approached primarily from a motivational perspective, as compensation practices can prompt people to join and stay with certain organizations over others (Capelli, 1999; Gerhart & Rynes, 2003) or drive them to direct more effort toward their work tasks (Akerlof, 1982; Rynes, Gerhart, & Parks, 2005). Financial worry, similarly, has been suggested to motivate employees to devote more effort to their work as a means of securing their economic status and/or avert further financial decline (Shoss & Probst, 2012). This essay departs from this focus on the motivational potential of money by arguing that it can play a prominent role in people's ability to perform at work. This essay examines the potential impact of employees' personal finances, and their worry about them, on their performance ability, and provide evidence of income effects in organizations from a more diversified perspective (Leana & Meuris, 2015).

Finally, this research extends the emerging behavioral model of financial scarcity (Bertrand et al., 2004, 2006) in two ways. First, while there is a growing body of evidence on the detrimental effects of financial worry and its consequent diminishment of cognitive capacity, none of this research has been conducted in actual work settings and thus little is known about its effect on work performance, and by extension, organizations. As Schilbach, Schofield, and Mullainathan (2016: 436) summarize, "In contrast to the rich body of evidence on the link between [cognitive] bandwidth and decision-making, evidence on the relationship between bandwidth and productivity is much more limited… [and represents] an area of research ripe for

investigation." Similarly, Staw (2010) has argued that we cannot assume that the findings from psychological experiments on cognitive processes will translate into similar effects on actual behavior in work settings. The research described here represents the first attempt to uncover these relationships using consequential work tasks, and thus provides a theoretical bridge between organization science and applied psychology. While organization science has documented changing work practices that may account for growing financial worry (e.g., Bidwell et al., 2013; Cobb, 2015; Lambert, 2008), applied psychologists have documented the costs of financial worry for individuals (e.g., Mani et al., 2013; Mullainathan & Shafir, 2013). This essay brings these two streams of research together in the present set of studies to show that the price of financial worry is borne by employers and employees alike.

Second, Essay 2 demonstrates that financial worry may not only decrease cognitive capacity directly, due to distraction (Mullainathan & Shafir, 2013), but also indirectly by increasing the frequency of emotional suppression over time. Previous research has shown that financial worry can trigger negative emotions (Haushofer & Fehr, 2014; Kushlev, Dunn, & Lucas, 2015) that people are likely to suppress because of their aversive nature (Meuris & Leana, 2015). Such emotional regulation, however, necessitates further effort and can reduce a person's available cognitive capacity for other aspects of his or her life (Gross, 1998, 2002), including work performance. Indeed, other research has documented the significance of emotional suppression in work contexts such as customer service (e.g., Grandey; 2003; Hochschild, 1983). Thus, in addition to the attentional consequences of financial worry argued in prior research, increases in the self-regulation of emotions associated with it may provide a second mechanism through which financial worry undermines cognitive capacity

1 OVERVIEW OF STUDIES

The hypotheses developed in Essay 1 are examined in both a natural and a controlled environment. Study 1 investigates the effect of financial worry on work performance in a field setting using objective performance data. Study 1 further examines whether emotional suppression may offer an indirect mechanism through which financial worry can undermine working memory and work performance. As part of this study, survey and lagged archival data on preventable accidents was collected from a large sample of truck drivers working for a national transportation company. Study 2 focuses on the causal relationship between financial worry and performance mediated by decrements in cognitive capacity. Participants were recruited for a laboratory session in which they complete a driving simulation task. Driving performance was used as the outcome of interest in both studies because accidents can be quite consequential for employees and employers, with significant personal, organizational, and societal costs. In addition, decreased driving performance can be attributed at the individual level of analysis and is a task where performance can be objectively quantified.

2 STUDY 1

2.1 Organizational context

Study 1 was conducted with a sample of full-time, short-haul truck drivers employed by a large transportation company. The company operates 21 terminals in 9 states, all of which were included in this study. Drivers received wages between $18.08 and $30.02 per hour and paid

benefits from their employer. In this regard, they represent a sample of "middle class" employees where variability in financial worry could be anticipated, with some drivers feeling financially strapped and others feeling relative financial stability. Considering the pay and benefits of this employee population, any effect of financial worry on performance should be a conservative estimate of its impact in other organizations where reasonable pay and benefits are not provided.

2.2 Sample and procedures

The target sample consisted of all full-time drivers ($N = 1649$) employed by the company. Truck drivers were selected for this study because they are responsible for an independent set of tasks where decreases in their available cognitive capacity can pose a significant cost to themselves and to the company. Indeed, as prior research on safety violations among commercial drivers suggests (e.g., Blanco et al., 2006; Lee, Lee, & Boyle, 2009), any reduction in cognitive capacity can have important consequences for the safety of the driver and others on the road. Performance was operationalized as the incidence of preventable accidents because this is a key component of organizational costs and thus of overall company performance. As one executive in the collaborating organization explained, "we are in the safety business first and the transportation business second."

For each driver who consented to participate in the study, responses to a pen-and-paper survey were collected on company time at the beginning of their work shift. Archival accident data was also collected for an 8-month period following completion of the survey. Since survey administration was limited to specified days at each terminal, data collection from those who were absent was not possible. Of the total number of drivers employed by the organization, 1,362 drivers (83% of the target population) were present during data collection at their terminals. A

small number of drivers who were present declined to participate in the study ($N = 73$ across the 21 terminals) leading to a survey response rate of 94.6% (78% of the target population) for a total of 1,289 respondents. Participants in this obtained sample were 97% male, had an average age of 47.74 years ($SD = 9.69$), and an average tenure of 10.11 years ($SD = 8.33$).

To examine whether there were any differences between the obtained and target sample, a comparison of the means and standard deviations on age and tenure, and the percentage of drivers with an accident gathered from archival records was used. This comparison found that there were no significant differences in age or tenure between the sample and the overall population ($ps > .365$), and the target sample and the obtained sample had comparable proportions on the outcome of interest (Target: 14.2%; Obtained: 14.3%). Due to some missing values in the survey and archival data, only cases where complete data were available were included in the analyses. Therefore, sample sizes used in the analyses ($N = 1,087$) are smaller than the obtained sample.[1]

2.3 Measures

Financial worry. A 4-item scale was developed capturing the extent to which people are concerned that they do not have sufficient financial standing to meet their needs. These items were "How often have you been worried about your financial standing", "How often have you felt satisfied with your financial standing (R)", "How often have you felt overwhelmed by your financial obligations" and "How often do you feel that you do not have enough money", with responses ranging from (1) *Never* to (5) *Always*. The scale was pre-tested using Amazon's

[1] Using all available data in the reported model does not change the direction or statistical significance of the results compared to those reported only using cases with complete data.

Mechanical Turk ($N = 300$) to assess its convergent and discriminant validity. That is, scale scores were correlated with, but distinct from, measures of related constructs and measures: perceived socio-economic status using the MacArthur ladder (Goodman et al., 2001), responses to the Minimum Income Question (Ravaillon, 2012), perceived income adequacy, household income, and highest attained education. The scale showed good internal consistency within the pre-test sample (Cronbach's $\alpha = .85$). Participants' financial worry was significantly associated with their assessment of income adequacy ($r = -.61$, $p < .001$), the Minimum Income Question ($r = .56$, $p < .001$), and subjective SES ($r = -.62$, $p < .001$). Moreover, financial worry was negatively correlated with household income ($r = -.34$, $p < .001$) and educational attainment ($r = -.12$, $p < .05$). In the current study, as in the pre-test, the items in the financial worry measure exhibited high internal consistency (Cronbach's $\alpha = .84$).

Several measures of financial wellness and financial behavior were further included on the survey and merged with archival data from drivers' 401(k) accounts to examine whether financial worry was correlated with these adjacent measures. Analysis of the retirement savings data indicated that financial worry was negatively related to drivers' total 401(k) balance controlling for tenure in the company ($r = -.18$, $p < .001$), and negatively related to the annual amount drivers contribute to their retirement savings ($r = -.16$, $p < .001$). In addition, financial worry was negatively correlated with paying off the full balance of their credit cards at the end of the month ($r = -.28$, $p < .001$); and positively related to having paid interest on their credit cards in the past year ($r = .20$, $p < .001$). In aggregate, these findings suggest that the measure of financial worry was related to, but distinct from, objective measures of financial wellness, measures of socio-economic status, and financial behaviors.

Financial standing. Drivers' financial standing was measured by asking them to report their total household income from all sources in the past year on a 9-point scale ranging from (1) *$10,000 - $19,999* to (9) *$100,000 or more*. As Leana and Meuris (2015) note, household income is more appropriate than individual pay in questions related to one's financial standing because spousal earnings and income from other sources (e.g., investments) can significantly affect the resources the employee has at her disposal and the psychological processes that emerge. To account for the availability of financial standing beyond household income, the level of drivers' emergency savings was measured on a seven-point scale ranging from (0) *No emergency savings* to (6) *Emergency savings equal to at least six months' worth of expenses* and drivers' confidence in their ability to receive credit or a conventional loan was measured on a five-point scale ranging from (1) *Not confident at all* to (5) *Very confident*. Since each item (HH income, emergency savings, and credit availability) contributes to an employee's financial standing, a composite measure was developed representing employees' total financial standing. To develop the composite measure, a z score of each item was calculated to account for variability in scale length and averaged them to derive a single measure (Meier, Brudney, & Bohte, 2011).[2]

Frequency of emotional suppression. The frequency of emotional suppression was assessed on the employee survey using the three-item surface acting scale developed by Brotheridge and Lee (2003) capturing the frequency of suppressing one's true feelings. Items were "Resist expressing your true feelings," "Hide your true feeling about a situation," and "Pretend to have emotions that you don't really have" with responses ranging from (1) *Never* to (5) *Always*. This scale had good internal consistency within the truck driver sample, Cronbach's $\alpha = .82$.

[2] Including separate measures for household income, emergency savings, and credit confidence provides similar findings to those reported in the results section.

Cognitive capacity. The eight-item cognitive problems sub-scale of the CAT-PD (Simms et al., 2011) was used as a measure of cognitive capacity. Scale items included "I formulate ideas clearly (R)," "I easily lose my train of thought," and "I frequently get things mixed up in my head" with responses ranging from (1) *Very true of me* to (5) *Very untrue of me*. The cognitive problems scale measures the efficacy of a person's memory, confusion, and cognitive self-regulation, each suggestive of differences in cognitive capacity. This scale was selected because its items capture individual differences in attention, memory, and executive function while also being sufficiently succinct to be completed within the allotted time for data collection. Although the scale tends to be used as a trait indicator, it simultaneously captures context-dependent states reflective of cognitive capacity. Indeed, as research on self-efficacy (Chen, Gully, & Eden, 2001), self-esteem (Pierce, Gardner, Cummings, & Dunham, 1989), and cognitive failures (Wallace & Chen, 2005) has shown, individual difference measures can reflect both trait and state dimensions of psychological constructs and have been used for both purposes. Similarly, the cognitive problems scale should capture context-dependent differences in attention, memory, and executive function, which are components of a person's cognitive capacity. The scale had a Cronbach's α of .71.

Preventable accidents. As the measure of performance, archival data on preventable accidents over a pre-determined 8-month interval was collected for each driver following the collection of the survey data. An accident is considered preventable when the driver is determined to be at fault for the accident by the responding law enforcement agency or the company if law enforcement is not involved. Collection of accident data was restricted to 8 months to avoid the summer months (June through August) and thus avoid increased missing data due to drivers' summer vacations. Preventable accidents were used as the measure of

performance in this study because, by definition, such accidents are due to driver error. These are also the costliest form of incident because the company may incur direct and indirect costs for damage to the truck or cargo, any damage incurred by third parties including fatalities, and/or injuries sustained by the driver. In the analyses, a dichotomous dependent variable was used representing whether a driver had a preventable accident in the 8-month interval. In total, 14.2% of the drivers in the study had preventable accidents within the 8-month period[3].

Control variables. A range of control variables were included in the analyses specifically intended to account for alternative explanations of the findings.[4] First, employees' age from archival records was included as a control given the effect of aging on fluid cognitive ability (Rushton & Ankney, 1996) and attention in demanding conditions (Tsang, 1998). Second, this study controlled for job tenure. Past research has indicated that increased experience can lead to higher levels of performance due to improved familiarity with the tasks and accuracy of intuition (Dane, Rockmann & Pratt, 2012; Dokko, Wilk & Rothbard, 2008). Since employee age and tenure were right skewed, their logarithmic function was used in the analyses.[5] Third, drivers' level of education was controlled for as a measure of general cognitive aptitude. Education was measured on a five-point scale ranging from (1) *Less than high school* to (5) *Graduate degree*. Fourth, the number of dependents was included because employees will have to stretch their financial standing further as more people depend upon them. Both job and life satisfaction were

[3] The distribution of accidents across the 8-month interval reveal that the frequency of accidents appears to be influenced by weather, increasing in the winter months and declining in the spring. There were no other discernable patterns in the distribution of accidents over time.

[4] The reported analyses do not control for individual pay on accident odds for two reasons. First, pay rates are determined by terminal and tenure, which are already accounted for in the analyses. Each terminal is classified within cost-of-living bands. Pay rate within each band is dependent on tenure, as pay rates increase each year after start of employment up to the third year. After 3 years with the company, the employee remains at the same pay rate throughout the rest of their tenure aside from company-wide annual increases. Second, the addition of pay did not change the reported results.

[5] Findings without any of the log transformations do not significantly differ from those reported in the Results section.

also controlled for in the model, which were measured with one item each on a six-point scale ranging from (1) *Very unsatisfied* to (6) *Very satisfied*. Controlling for job satisfaction accounts for any variance in the probability of safety incidents attributable to a lack of care about one's job or the organization. Life satisfaction was further controlled for because it is conceivable that the relationship between drivers' financial standing and cognitive capacity is not primarily due to financial worry, but rather results from non-financial stressors, such as family conflict, which in turn may be cognitively taxing.

Two personality dimensions, conscientiousness and emotional stability, were also controlled for in the model. As Barrick, Mount, and Judge (2001) found in their evaluation of prior meta-analyses, conscientiousness is the most consistent personality-based predictor of differences in performance on the job. Moreover, emotional stability was included to account for individual differences in the experience of anxiety and nervousness (Barrick & Mount, 1991) given that the relationship between financial worry and cognitive capacity could be due to individual differences in the propensity to experience negative affect rather than the emotional suppression mechanism the theory proposes. Goldberg's (1992) 8-item measures of conscientiousness and emotional stability were used, assessing dimensions such as "organized" and "efficient" for conscientiousness and "relaxed" and "moody" for emotional stability on a 9-point scale (Cronbach's α = .84 for conscientiousness, .80 for emotional stability).

Finally, driver classification was included to account for differences in the length and type of routes. The company classifies each driver as either a "city driver" or a "line haul driver." City drivers (coded 1) deliver packages to commercial and residential addresses while line haul drivers (coded 0) are responsible for the transportation between terminals. An offset variable was further included to account for drivers who left the company within the 8-month interval since

turnover within the interval will reduce the number of days in which they could have had an accident.

2.4 Analytic approach

Since drivers are nested within terminals, the first step was to assess whether the model should account for variance in mean differences in financial worry or working memory attributable to terminal membership by calculating the intra-class correlation coefficient (ICC) for these variables. The ICC was not statistically significant for financial worry, $F(20, 1216) = 1.232$, $p = .218$, or working memory, $F(20, 1242) = .936$, $p = .541$, indicating that employees' levels of financial worry and working memory did not significantly differ by terminal. The ICC for preventable accidents further suggested that there was no significant difference in the rate of preventable accidents among terminals, $F(20, 1268) = 1.150$, $p = .291$[6]. Nevertheless, company managers appeared convinced that the terminals did indeed meaningfully differ on these and other factors. Thus, this study accounts for any potential terminal-level variance in predicting the likelihood of a preventable accident.

Mplus 7.4 (Muthén & Muthén, 2015) was used to examine the hypotheses within a single structural equation model using maximum likelihood estimation with robust standard errors. To account for terminal membership, this study used a random intercept model where the model adjusts for any variance in the log-odds attributable to terminal for the paths predicting the probability of a preventable accident. The hypotheses concerning indirect effects were examined using the Mplus procedures for mediation described by Muthén (2011) and Muthén and

[6] ICCs can be calculated for binary outcomes similar to the procedures for continuous variables (Murray, 1998).

Asparouhov (2015) since bootstrapping is not recommended for mediation models with multi-level effects (Hayes, 2014). These procedures use the continuous latent variable underlying the binary performance outcome and report a Sobel-type test implemented by Mplus to examine the statistical significance of the indirect effects hypothesized in Essay 1 (Hayes, 2014).

2.5 Results

***Descriptive statistics and correlations*.** Table 1 shows the means, standard deviations, and correlations among the variables in the analysis. The mean household income in the sample is between $60,000 and $70,000, placing drivers in the middle quintile and above the median income in the United States (U.S. Census Bureau, 2015). Thus, the sample is representative of "middle-class" employees in the U.S. who do not inherently experience economic deprivation, as do the working poor (Leana, Mittal & Stiehl, 2012). Drivers in the sample, on average, had only 2 months' worth of expenses in their savings and were, on average, "somewhat confident" that they could get a loan if they applied for one today. Further, drivers within this organization reported high levels of job and life satisfaction. Correlations show a significant negative relationship between drivers' financial standing and financial worry, providing initial support for Hypothesis 1. The correlations among study variables further show that financial worry was negatively related to cognitive capacity and positively related to having a preventable accident, providing initial support for Hypothesis 2a. Moreover, the frequency of emotional suppression was significantly correlated with financial worry and cognitive capacity, providing initial support for Hypothesis 3.

Table 1. *Essay 2, Study 1 descriptive statistics and correlations*

		M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Financial worry	2.66	0.64																
2	Age	48.00	9.63	-.148*															
3	Tenure	10.03	8.27	-.134**	.408**														
4	Education	1.47	0.77	-.033	-.061*	-.063*													
5	Household income	6.32	2.00	-.194**	.192**	.282**	.035												
6	Emergency savings	2.01	2.17	-.436**	.204**	.193**	.100**	.214**											
7	Credit confidence	2.63	1.52	-.485**	.214**	.259**	.044	.287**	.504**										
8	Financial standing	0.00	0.75	-.499**	.273**	.328**	.082*	.669**	.769**	.800**									
9	Dependents	1.33	1.38	.197**	-.316**	-.131**	.006	-.045	-.207**	-.225**	-.210**								
10	Job satisfaction	4.49	1.46	-.094*	-.103**	-.041	.023	.021	.012	.034	.030	.014							
11	Life satisfaction	4.42	1.43	-.240**	-.019	.056*	-.006	.134**	.130**	.170**	.194**	-.035	.465**						
12	Conscientiousness	6.99	1.48	-.181**	-.075*	-.015	.102**	.068*	.111**	.101*	.124**	.006	.067*	.119**					
13	Emotional stability	6.52	1.46	-.229**	-.008	-.032	.056	.045	.064*	.052	.071*	.014	.094**	.143**	.452**				
14	City driver	0.72	0.45	.028	-.138**	.045	.016	-.156**	-.057*	-.032	-.109**	.041	-.045	.008	.029	-.011			
15	Emotional suppression	0.96	0.78	.314**	-.128**	-.105**	.011	-.060*	-.186**	-.198**	-.195**	.088*	-.092*	-.167**	-.193**	-.272**	.015		
16	Cognitive capacity	3.01	0.52	-.219**	.017	.024	.074*	.041	.101**	.108**	.110**	-.001	.066*	.077*	-.384**	-.328**	-.020	-.299**	
17	Preventable accident	0.14	0.35	.062*	-.022	-.142**	.033	-.064*	-.056*	-.079*	-.088*	-.001	-.005	-.065*	-.050	-.008	.143**	-.053	-.094**

* $p < .05$
** $p < .001$

Structural equation model. The direct paths of the structural equation model are reported in Table 2. Financial standing was negatively related to financial worry, B = -.387, SE = .026, p < .001. In turn, financial worry was negatively associated with cognitive capacity, B = -.062, SE = .026, p < .05, after accounting for the effect of emotional suppression, B = -.131, SE = .021, p < .001, providing support for Hypothesis 2a. Financial worry was positively related to emotional suppression, B = .374, SE = .033, p < .001 and, as predicted, emotional suppression partially mediated the relationship between financial worry and cognitive capacity, B_{indirect} = -.049, SE_{indirect} = .008, p < .001, supporting Hypothesis 3. The results also support Hypothesis 2b, as financial worry mediated the relationship between financial standing and cognitive capacity, B_{indirect} = .043, SE_{indirect} = .009, p < .001. Furthermore, cognitive capacity was negatively associated with the likelihood of a preventable accident, B = -.397, SE = .158, Exp(B) = .673, p < .05, providing support for Hypothesis 4a. In support of Hypothesis 4b, financial worry had a significant indirect effect on the likelihood of a preventable accident through decrements in cognitive capacity, B_{indirect} = .044, SE_{indirect} = .020, p < .05.

Overall, the model suggests that an average driver has a 10.3% probability of a preventable accident.[7] A one standard deviation increase in financial worry is associated with a 0.4% increase in the predicted probability of a preventable accident through the demands financial worry places on drivers' cognitive capacity (after accounting for individual differences in the control variables). Based upon the effect size, a one standard deviation increase in financial worry within the sample would represent 8 additional preventable accidents per year. To put this effect into financial terms, the Federal Motor Carrier Safety Administration (2008) estimates that the average costs of such accidents is $125,070 when no injuries are involved;

[7] Although 14.3% of the sample had a preventable accident, 10.3% is the probability of a preventable accident for a line haul driver with average values on the continuous variables.

$293,922 when at least one non-fatal injury occurs; and $6,349,486 when a fatality occurs.[8] Data from the FMCSA (2016) further show that 79% of accidents involve no injuries, 20% involve at least one non-fatal injury, and 1% include a fatality. If no injuries occur for any of these accidents, a conservative estimate of the annual organizational costs of financial worry would be over $1 million (8 additional accidents). This amount rises to over $1.3 million if, as the national data suggests, 20% of these accidents involve an injury; and the cost would increase to over $7.2 million if there is one fatality among these preventable accidents.

[8] It was not possible to obtain accident cost data more recent than 2008 so these figures under-represent current actual costs. Inflation rates between 2008 and 2017 were 1.44% per year on average (http://www.in2013dollars.com/2008-dollars-in-2017?amount=100). Using this rough calculation, current costs would be $142,205 for accidents without injuries; $334,189 for accidents with at least one injury; and $7,219,366 when a fatality occurs.

Table 2. *Essay 2, Study 1 path analysis*

	Financial worry	**Working memory**	**Performance**[a]
Constant	.280**	2.844**	2.377**
	(.013)	(.073)	(.822)
Age	.056	.111	2.508*
	(.166)	(.164)	(1.033)
Tenure	.012	.013	-1.096**
	(.027)	(.021)	(.256)
Education	.020	.037*	.097
	(.102)	(.015)	(.102)
Dependents	.051**	.011	-.069
	(.011)	(.011)	(.051)
Life satisfaction	-.058**	-.018	-.135**
	(.018)	(.104)	(.067)
Job satisfaction	-.005	.010	.005
	(.010)	(.011)	(.068)
Conscientiousness	-.010	.095**	-.089
	(.014)	(.013)	(.066)
Emotional stability	.075**	-.045**	-.076
	(.014)	(.010)	(.077)
City driver	-.016	-.026	1.545**
	(.037)	(.022)	(.304)
Offset	.272	.276	-.505
	(.176)	(.174)	(1.396)
Financial standing	-.387**	.003	-.193
	(.026)	(.026)	(.150)
Financial worry		-.062*	-.171
		(.026)	(.150)
Emotional suppression		-.131**	-.063
		(.021)	(.156)
Working memory			-.397*
			(.158)

[a]Random intercept by terminal; * $p < .05$, ** $p < .001$

2.6 Additional Analyses

To address potential competing explanations for the results, three additional analyses were conducted with subsets of the sample. First, at two terminals ($N = 160$), it was possible to collect more fine-grained data on different sources of worry to check the assumption that financial concerns would be particularly pronounced at work. Drivers were asked to indicate on 9-point

scales their level of worry about nine different aspects of their lives, including relationship with partner, relationship with family, relationships with friends, financial standing, experiences at work, living conditions, personal health, family health, and childcare or schooling. Surveys were completed at work, on company time, and just before the start of the drivers' shifts. Worry regarding their financial standing had the highest mean score on this scale ($M = 4.43$, $SD = 2.54$) and the strongest correlation with cognitive capacity ($r = .26$, $p < .01$) compared to the other sources of concern.[9] At a minimum, these findings suggest that financial worry weighs heavily on drivers when they are at work, more so than other potential sources of concern.

Second, data on hours worked was collected for 970 drivers from their 401(k)-account information but did not include it in the primary model to maximize the available sample for analysis. However, it was necessary to examine whether the findings could be attributed to differences in hours worked. That is, financial worry could motivate employees to work extra hours, which subsequently can fatigue them to the detriment of their cognitive capacity and subsequent driving performance. Inclusion of the log hours worked, however, did not meaningfully change the reported results and hours worked was not a significant predictor of cognitive capacity, $B = .088$, $SE = .131$, $p = .502$, nor the likelihood of a preventable accident, $B = -.967$, $SE = .903$, $p = .284$.

Third, to address potential reverse causality, data on financial standing and financial worry was collected from an employee survey conducted approximately a year after the initial survey data collection. This survey was completed by 1,331 drivers (80.7% of the driver population) of which 867 (67% of study sample) also participated in the initial study. It is possible that cognitive capacity and performance affect financial worry rather than the reverse as

[9] Worry about relationships and health were also significantly related to cognitive capacity but these correlations were weaker, ranging from .16 to .21. The means on these items were also lower, ranging from 2.52 to 3.87.

was hypothesized in Essay 1. To explore this possibility, this study additionally examined whether cognitive capacity or performance predicted changes in financial standing and worry following collection of the accident data. These analyses indicate that neither cognitive capacity, B = -.044, SE = .041, p = .278, nor having a preventable accident, B = .004, SE = .053, p = .936, predicted changes in post-study financial standing. Moreover, neither cognitive capacity, B = .062, SE = .060, p = .297, nor having a preventable accident, B = -.065, SE = .081, p = .422, predicted changes in post-study financial worry. These results provide some support for the causal ordering hypothesized in Essay 1, whereby financial worry leads to worse performance, rather than the reverse.

2.7 Discussion

Study 1 found that financial worry increased the likelihood of a preventable accident indirectly through decrements in cognitive capacity. This effect was significant after accounting for various established predictors of performance, such as tenure, conscientiousness, and job satisfaction, suggesting that the negative effect of financial worry on performance is not just because people with financial problems are less conscientious (as some prior literature has suggested e.g., Bernerth et al., 2012), or merely unhappy with their employer or their lives overall.[10] Consistent with the theory developed in Essay 1, the results support the ability argument proposed, as financial worry had a significant indirect effect on performance through cognitive capacity. In addition, as people are in better financial standing, they are less likely to

[10] A model excluding the self-reported control variables (e.g., conscientiousness, life satisfaction) lead to a stronger effect of financial worry on performance: a one standard deviation increase in financial worry was associated with an 5.2% increase in the odds of a preventable accident.

feel worried about their finances. Financial worry, in turn, was associated with reduced cognitive capacity. The results supported the mediating influence of emotional suppression parallel to the "tunneling" process posited by prior literature (Mullainathan & Shafir, 2013). The frequency of emotional suppression partially explained the relationship between financial worry and cognitive capacity after controlling for individual differences in emotional stability, which is suggestive of multiple mediating mechanisms (Preacher & Hayes, 2008).

In summary, the findings support the argument that financial worry can have a debilitating influence on employees' ability to perform in their jobs because of its detrimental effect on cognitive capacity, as proposed in Essay 1. When employees take their financial worries to work (Meuris & Leana, 2015), they have less mental bandwidth available for tasks relevant and essential to their jobs. This study moves beyond prior research on financial scarcity in two important ways. First, it shows a link between financial worry and actual job performance using objective data. While others have studied the tax imposed by financial worry on cognitive test performance (e.g., Carvalho et al., 2016; Mani et al., 2013), the results extend these findings to on-the-job performance in real organizations, and thus are the first to offer evidence of the real costs to employers (as well as employees) of financial worry in the workforce. Second, the study provides evidence for multiple mechanisms driving the effect of financial worry on cognitive capacity. While prior work has focused on the tunneling effect of scarcity (Mullainathan & Shafir, 2013), the findings suggest that the frequency of emotional suppression serves as an additional mechanism through which financial worry can affect cognitive ability.

Although Study 1 provides evidence for a relationship between financial worry, cognitive capacity, and actual on-the-job performance, it has several limitations. First, while the measurement of work performance is objective and occurred after survey data collection, this

study is unable to show the causal ordering for the relationships. Perhaps drivers who are more accident-prone worry more about losing their jobs, and thus poor performance is causing worry rather than worry causing performance problems as hypothesized. The additional analysis, which measured financial standing and worry over a year after the assessment of accident rates, provides evidence to refute such a claim. Still, it does not establish causality. Second, it is possible that the decrements in cognitive capacity are driven by other concerns such as family worry, fatigue, or depression, which often accompany the availability of financial standing and financial worry. While the analyses controlled for life satisfaction as a proxy for other life stressors, and an additional analysis was conducted which shows that financial worry is the most salient source of concern for drivers, they were unable to completely isolate financial worry from other factors that may be associated with one's financial standing and could result in decreased cognitive capacity and job performance.

Third, cognitive capacity was measured using a self-report scale where employees are likely to underestimate and underreport the extent to which their cognition is taxed due to inaccurate introspection of cognitive processes (Pronin & Kugler, 2007). Given the procedural constraints, it was not possible to measure cognitive capacity using direct measurements (e.g., variants of complex span tasks - Engle, 2002; Foster et al., 2015). Although this tendency toward under-reporting likely provides a more conservative estimate of the proposed relationships, it is nonetheless desirable to test the model with measures less prone to social desirability bias. Finally, this study was conducted with a largely male sample. It is possible that females respond differently to financial worry than males. Despite these potential limitations, Study 1 offers notable evidence for a significant negative relationship between financial worry, cognitive capacity, and subsequent work performance**.**

3 STUDY 2

To address the limitations in Study 1, a second study was conducted in which the experience of financial worry was manipulated in a laboratory environment. The focus in Study 2 is on establishing the indirect relationship between financial worry and task performance through decrements in cognitive capacity. The manipulation of financial worry addresses several limitations to Study 1. First, random assignment of participants to experimental conditions offers the ability to explicitly isolate financial worry as an antecedent to cognitive capacity and job performance and thus address potential competing hypotheses regarding performance decrements. A lab environment provides the opportunity to establish firm causal linkages for the relationships found in Study 1. It further presents the opportunity to use a more complex measure of cognitive capacity, as well as to examine the effects in both males and females.

Study 2 concentrated only on the key variables to establish causal ordering: financial standing, financial worry, cognitive capacity, and task performance. It did not examine the indirect effect of emotional suppression in Study 2 because the theoretical model, drawing from research on self-regulation (Muraven & Baumeister, 2000), posits that the cognitive drain of suppression results from continued motivation to suppress one's emotions over extended periods of time rather than suppression within a single lab session. Moreover, while situations where people feel motivated to suppress their emotions can be artificially created within lab environments (e.g., Gabriel & Diefendorff, 2015), pre-testing revealed that such situations simultaneously introduce a design confound because the anxiety inherent in these contexts can itself undermine cognitive capacity (e.g., Diamond, Fleshner, Ingersoll & Rose, 1996). Therefore, this study focused on addressing the key limitations to Study 1 and establishing the causal relationship between financial worry and work performance mediated by cognitive

capacity. As with the prior study, driving safety was used as the performance outcome of interest.

3.1 Sample

Ninety participants were recruited through on-campus advertising at a northeastern university and online job board listings. This sample size is consistent with prior research focused on the effects of financial scarcity on cognition (Mani et al., 2013). Potential participants were told that they could earn up to $20 for completion of the study, with $10 guaranteed by their attendance and an additional $10 that could be earned within the one-hour session. Three criteria were established for participation. First, to ensure that participants were familiar with U.S. traffic laws, only those with a valid U.S. driver's license were eligible to participate. Second, to be eligible for participation, participants were also required to be employed for at least 20 hours per week to increase the chances that the financial worry manipulation would be consequential to them. For the same reason, this study also recruited adults rather than younger college students who may receive financial support from parents and thus be relatively unconcerned with finances. Two participants were removed from analyses due to technical issues during the session that hindered the complete collection of their data. The remaining sample (N = 88) was 51.7% female and had a mean age of 27.9 years (SD = 9.92).

3.2 Procedures

Participants signed up online for a 1-hour timeslot. When they arrived at the lab, they were informed that they would be asked to complete a series of tasks at a computer station during the

session with the opportunity to earn additional compensation. Prior to initiating the manipulation, each participant was provided with an introduction to the controls of the driving simulator (e.g., steering wheel, brakes, acceleration). They received a scripted instruction of the simulator from the experimenter and completed a baseline route to become accustomed to the simulator controls, which was used as a pre-manipulation baseline to control for any naturally-occurring differences in aptitude for the driving task.

Next, following the paradigm outlined by Mani et al. (2013), participants were randomly assigned to a low or high emergency expense condition. In the high expense condition, participants were asked to imagine that their car had a breakdown and that it would cost $1,500 to repair the problem. Participants were asked to think about how they would navigate this financial decision and how this expense would affect their current life as they proceeded through the subsequent tasks. They were informed that they would be asked to answer these questions after completion of the tasks. In the low expense condition, the same procedure was used, but the cost of the repair was only $150. Consistent with Mani et al. (2013), an effect of this manipulation is only expected for people low in financial standing because the imagined expense would weigh more heavily on them. This approach follows the moderation of process design approach proposed by Spencer, Zanna, and Fong (2005) where the interaction between an independent variable and its mediator provides an alternative to mediation by measurement, as used in Study 1. That is, in Study 2, it is expected that being in worse financial standing enhances the likelihood of being worried about one's finances, in this case due to an imagined emergency expense, which subsequently reduces cognitive capacity.

After the emergency expense manipulation, cognitive capacity was measured by having participants complete shortened versions (approximately 10 minutes) of two standard cognitive

tests: an operation span task and a symmetry span task (Foster et al., 2015). Upon completing these tests, participants completed the driving simulation. Each participant was asked to drive a randomly-generated route of approximately 6 miles using the City Driver simulation software. Participants were instructed that they could earn up to an additional $10 as part of the task. For each ten-second interval that they arrived past the 10-minute time limit, 25 cents was deducted from their $10 potential additional pay out. In addition, participants had 25 cents deducted for every traffic infraction they incurred during the task. After completion of the driving task, participants were asked to answer the questions posed in the manipulation and complete the demographic and financial questions. At the end of the session, all participants were paid the full $20 ($10 for attendance and $10 experiment pay out) and instructed not to tell anyone about the tasks in the session or that they received the full amount after completion of the study.

The $10 incentive was introduced in the driving task for two reasons. First, a relatively large incentive (doubling their pay for the hour) ensured that participants did not speed through the course to complete the simulation early or, conversely, drive unnaturally slowly to avoid traffic infractions. More importantly, the incentive provided participants with motivation to perform well in the driving task, and thus allowed this study to examine whether inducing financial worry lead people to perform better when people have an incentive to do so. Overall, the incentive allowed this study to test the hypotheses under conditions like those in real jobs, where motivation and ability can be operating simultaneously, albeit in potential conflict regarding the direction of their effects, increasing the psychological realism of the experiment.

3.3 Measures

Financial standing. Financial standing was measured using the same three indicators as in Study 1: reported household income, emergency savings, and credit confidence. As in Study 1, responses were transformed to z scores and averaged to create a composite indicator, which was entered as a continuous variable in the analyses. Again, only the performance of participants with lower financial standing should be adversely affected by the financial worry manipulation.

Cognitive capacity. Complex span tasks are widely used in cognitive psychology as measures of cognitive capacity (Colom et al., 2006). Here shortened versions of the operation and symmetry span tasks were used following the procedures developed by Foster et al. (2015). In the operation span task, participants were asked to remember a series of numbers in order while completing some basic math equations. When participants started the task, they received a number followed by a math equation that they indicated to be true or false.[11] After answering the math equations, they were asked to recall the numbers in order. Participants completed six trials of the number-equation combinations in randomized order with the shortest trial consisting of 2 combinations and the longest trial consisting of 7 combinations (Foster et al., 2015). In the symmetry span task, participants were asked to remember a series of highlighted squares within a larger square. They saw a highlighted square followed by a figure that they judged to be symmetrical or not symmetrical. As in the operation span task, this repeated for 6 trials in random order for 2 to 7 iterations. After the number of iterations in a trial was completed, participants were asked to recall the position of the highlighted squares in order. Participants'

[11] The software used to conduct the complex span tasks can be obtained from http://www.cognitivetools.uk/ .

scores on both span tasks were summed (Foster et al., 2015) with a maximum possible score of 54 so that higher numbers reflect a higher cognitive capacity.

Since cognitive capacity was operationalized differently in Study 1 and Study 2, data was collected from 100 participants on Amazon's MTurk to examine whether the instruments used in the two studies converge on the same underlying construct. Participants completed both the psychometric scale used in Study 1 and the cognitive tests used in Study 2, in counterbalanced order. The data indicate a significant positive correlation between the score on the cognitive capacity measure (Study 1) and the score on the cognitive tests (Study 2), $r = .39$, $p < .001$. For comparison, the correlation between the two cognitive tasks used in Study 2 – which are explicitly designed to measure the same construct using the same procedures – is only somewhat higher (.47, $p < .001$).

Task performance. Task performance was measured by having participants drive a route using the City Driver simulation software and controls. The software required the researcher to input the trip length, after which it generated a random route for the participant to drive. For every traffic infraction, the software assigned points based on the severity of the infraction (e.g., driving on the opposite side of the road increased participants' score more than failing to use a turn signal). Therefore, higher scores indicate worse performance on the driving task. In the analyses, participants' scores were divided by their time to reach their destination because participants who missed or took wrong turns could have a slightly shorter or longer route than other participants depending upon the recalculated route assigned by the software. Points per minute were used to make the outcome measure comparable across participants.[12] In predicting

[12] We were not able to adjust the software to maintain the required distance. Furthermore, the software only allowed us to indicate a distance range rather than an exact distance, leading to natural fluctuations in participants' driving time. Results using performance scores while controlling for time driven rather than dividing scores by time leads to similar findings as those reported in the results section.

driving performance, participants' performance in the baseline run was included to account for between-individual differences in driving aptitude and speed of learning on the simulator.

3.4 Results

Descriptive statistics. Participants in the sample had, on average, a household income between $30,000 and $40,000 ($M$ = 2.85; SD = 2.56), 3 months of expenses in emergency savings (M = 2.63*; SD* = 1.80), and were "somewhat confident" that they could get a loan (M = 2.77*; SD* = 1.39). In the cognitive capacity tasks, participants on average gave correct answers on approximately 27 of the 54 items across both tasks (SD = 8.89). In the baseline run on the driving simulator, participants took an average of 8 minutes to complete the route and scored 555 points per minute (SD = 386.72). On the task performance run, participants took an average of 9.35 minutes and scored 459 points per minute (SD = 303.23).

Manipulation check. To assess whether the emergency expense manipulation was effective in eliciting financial worry, participants were asked to indicate the extent to which they were currently worried about nine specific aspects of their lives after reading the scenario and thinking about the related questions. These aspects included participants' financial standing but also their family, children, work, and health. As previously described, the effect of the emergency expense manipulation conditional on participants' financial standing was examined, as it is expected that imagining a $1,500 car payment would be impactful for those lower, but not higher, in financial standing (Mani et al., 2013).

There was a significant main effect for financial standing on worry regarding one's financial standing, B = -.753, SE = .143, $p < .001$, indicating that as participants had more financial standing, they were less likely to be worried about their finances, regardless of

condition, consistent with Hypothesis 1. In addition, there was a significant interaction between financial standing and condition, B = -.392, SE = .143, p < .01. Participants in worse financial standing (-1SD) were more worried about their financial standing in the high expense condition than those in the low expense condition, B = .470, SE = .159, p < .01, but there was no significant difference in self-reported financial worry by condition among those in better financial standing (+1SD), B = -.160, SE = .162, p = .327.[13] Overall, the manipulation was effective in inducing financial worry for those lower in financial standing, but not higher in financial standing. These findings were as expected and consistent with those of Mani et al., (2013).

Moderated mediation model. As in Study 1, Mplus 7.4 was used to examine the hypothesized direct and indirect effects using maximum likelihood estimation.[14] Participants who were in worse financial standing (-1SD) had significantly lower levels of cognitive capacity in the high expense condition than in the low expense condition, B = -3.595, SE = 1.197, p < .01, while there was no significant difference in cognitive capacity between conditions for people in better financial standing (+1SD), B = 2.337, SE = 1.265, p = .065, providing support for Hypothesis 2a (See Figure 3). There was also a significant effect of cognitive capacity on driving performance, B = -9.843, SE = 3.509, p < .01, providing support for Hypothesis 4a.

[13] In contrast, there was no significant interaction effect on the other sources of worry (ps > .155) except one's work (p = .045). Given that the manipulation involved a car break down, it is possible that it led some to become worried about retaining their jobs if such a situation were to happen to them.

[14] The use of robust standard errors (RSEs) provides similar findings to those presented in the results section. However, since bootstrapping procedures for the indirect effects are not available when using RSEs, we report the results using conventional standard errors to remain consistent between discussion of the direct and indirect effects in the results section.

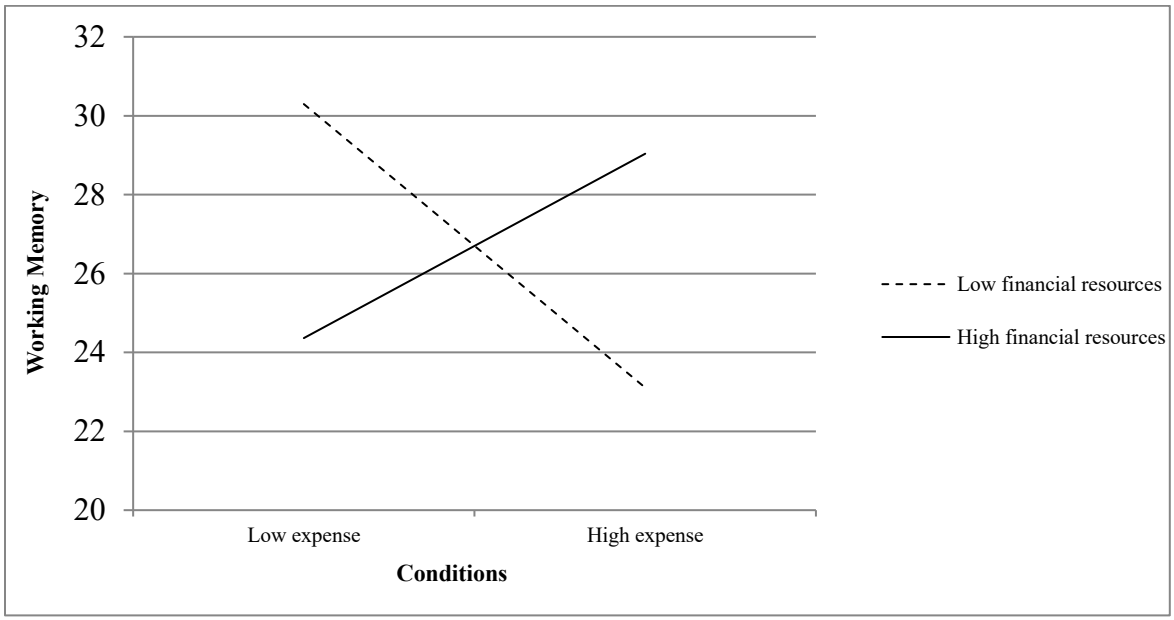

Figure 3. *Essay 2, Study 2 interaction between emergency expense and financial standing on working memory*

To test Hypothesis 4b, this study further examined if there was an indirect effect of financial standing and expense condition on driving performance through their combined effect on cognitive capacity. Following Hayes's (2015) procedure, 95% confidence intervals were calculated of the bootstrapped (10,000 iterations) index of moderated mediation, which examines the difference between indirect effects at different values of a moderator. In other words, this procedure investigated whether there was a significant difference between the indirect effect of the manipulation on performance in the driving simulation as a function of participants' financial standing. The index of moderated mediation indicated a significant difference in the indirect effect of the emergency expense manipulation on driving performance through cognitive capacity depending upon participants' financial standing, [95%CI = -98.375, -7.883], as the confidence interval excludes 0. Specifically, there was a significant indirect effect of condition

on driving performance when participants were in worse financial standing [95%CI = 7.970, 94.369], but not when participants were in better financial standing [95%CI = -77.703, 1.198]. These results suggest that, as predicted, the expense manipulation significantly reduced driving performance through decrements in cognitive capacity for those low, but not high, in financial standing, providing support for Hypothesis 4b.

3.5 Discussion

Study 2 examined the causal relationship between manipulated financial worry, cognitive capacity, and driving performance. A significant effect of the emergency expense manipulation on cognitive capacity was found among participants low in financial standing, as expected given that an imagined expense should be more impactful for those who were in poorer financial standing available to them.[15] As in Study 1, those primed to experience financial worry performed worse in the driving simulation because of decreases in cognitive capacity. Moreover, as predicted, there was no direct effect of financial worry on performance, either positively or negatively. Instead, financial worry dampens cognitive capacity, which in turn depresses performance. Thus, the findings support the ability argument put forth in Essay 1, despite the financial incentive.

While prior experiments show that financial worry can significantly dampen cognitive test scores, Study 2 advances the understanding of these effects in three ways. Importantly, it ties a person's financial worry not just to standard cognitive test scores, but to actual task

[15] Although not statistically significant, there was a difference between participants high and low in financial standing in the control condition as well. One possible explanation for this effect is that the control scenario ($150 car repair) assured participants in worse financial standing that they could overcome such a challenge, increasing their perceived efficacy and performance on the cognitive capacity tests (e.g., Stajkovic and Luthans, 1998).

performance. As Schilbach et al. (2016) note, despite the evidence that financial worry may dampen performance on cognitive tests (e.g., Carvalho et al., 2016; Mani et al., 2013), the relationship between financial worry and job performance cannot be presumed from the findings of these prior studies (also see Staw, 2010). Here, this study offers evidence for a debilitating effect of financial worry on actual task performance. Relatedly, the task used in Study 2 is one that is not only part of many adults' day-to-day experience but is required of employees in a variety of occupations, ranging from postal workers to sales people. Finally, Study 2 includes an incentive to perform well on the task, which motivation-based arguments would predict to enhance driving performance among participants manipulated to be worried about their finances by increasing their impetus to concentrate on it. Instead, the results suggest that people who are worried about money perform worse on their assigned tasks even when there is an explicit incentive to do well.

Overall, the results of this experiment further support a negative indirect relationship between financial worry and performance due to its detrimental impact on performance ability. Thus, the findings of Study 2 support those of Study 1 and, additionally, provide evidence of a causal effect of financial worry on a person's ability to perform on-the-job. Moreover, due to random assignment to conditions, it is possible rule out competing hypotheses (e.g., trait anxiety; other sources of worry) that may affect cognitive capacity or task performance.

4 GENERAL DISCUSSION

Essay 2 tested the mechanisms through which financial worry can negatively impact people's ability to perform at work proposed in Essay 1. Across two studies, it found that financial worry

decreases cognitive capacity, which subsequently hinders performance. Study 1 demonstrated the association between financial standing, financial worry, cognitive capacity, and subsequent job performance among a sample of commercial truck drivers. Drivers who worry more about their financial standing were more cognitively taxed and, as a result, were more dangerous drivers. Study 2 provided evidence for the causal linkages behind these findings. Participants in worse financial standing manipulated to face a large emergency expense had less cognitive capacity available to them, which reduced their ability to perform in a driving simulation.

The findings of this essay have several implications. First, the findings indicate that when people are worried about money, they tend to perform worse in their jobs, thus imposing costs on both individuals and the organizations that employ them. While historic changes in work practices have had obvious detrimental effects on employees (Bidwell et al., 2013; Cummings & Kreis, 2008; Davis, 2009; Lambert, 2008), the studies suggest that these detrimental consequences can spill over to employers: As employees are worried about their financial standing, they carry these concerns to work (Meuris & Leana, 2015), which may distract them from their work tasks and thus undermine their performance. Second, from a theoretical standpoint, the studies provide a pathway for a more expansive understanding of the role of money in affecting people's behavior at work. Whereas prior research has focused on its role as a motivational lever (e.g., Akerlof, 1982; Rynes et al., 2005; Shaw & Gupta, 2015), the findings show that employees' financial standings can significantly affect their *ability* to perform at work. In this regard, this research expands the perspective of organizational science in examining how financial considerations affect employees from a more diversified perspective (Leana & Meuris, 2015).

At the same time, this essay advances prior experimental work that has argued for a relationship between financial worry and cognitive capacity (e.g., Mani et al., 2013; Mullainathan & Shafir, 2013). Foremost, this essay examines the effect of people's financial worry on their actual work performance in Study 1 and on a task with high ecological validity in Study 2. In this regard, the studies move beyond the use of cognitive ability tests to tasks with real organizational consequences and a substantial impact on people's lives (Schilbach et al., 2016; Staw, 2010). In addition, this essay ties a salient incentive to task performance in Study 2 where people can double their pay-off if they perform well in the task, yet financially-stressed participants performed worse. These effects emerged when there was a relatively large incentive to perform well, suggesting the detrimental impact financial worry can have on people's lives even when they are motivated to succeed.

Finally, Study 1 provided some support for an additional mechanism that explains the relationship between financial worry and cognitive capacity. That is, financial worry can be cognitively taxing not just because it appropriates attention but also because of the frequent suppression of negative emotions that typically accompanies it (e.g., Haushofer & Fehr, 2014). Whereas prior literature has focused on the "tunneling effect" (e.g., Mullainathan & Shafir, 2013), an attentional process whereby finance-related thought drains people's cognitive capacity, Study 1 demonstrates that financial worry can simultaneously reduce cognitive capacity through emotional suppression, a self-regulatory process that usurps cognitive resources over time because of the effort required to engage in such sustained emotional control (Muraven and Baumeister, 2000).

5 PRACTICAL IMPLICATIONS

The studies demonstrate that financial worry can have organizational costs by dampening employees' ability to perform at work. For the transportation company in Study 1, such costs amount to a conservative estimate of over $1 million per year, suggesting that employers may have a vested interest in the financial well-being of their employees. In terms of the practical implications of the research, the central question is what organizations can do with these findings. Given the wide reach of financial worry – afflicting two out of three adults just in the U.S. (APA, 2015) – the problem is simply too far-ranging to be addressed through short-term measures such as employee selection practices within firms. Various scholars have argued for the importance of providing employees with high quality jobs (e.g., decent pay and benefits, stable work schedules, job security) for sustained organizational performance (Kalleberg, 2011; Pfeffer, 1998, 2010; Ton, 2014). Other practices may include holistic cost-of-living calculations in pay determinations or re-adoption of some form of defined benefit retirement plans. In Study 1, however, drivers were reasonably well paid and received good benefits, yet financial worry still interfered with work performance. This suggests that employers may also wish to implement practices that directly address financial well-being, such as company-sponsored savings programs, mortgage assistance, and similar initiatives. In summary, while this essay shows that financial concerns can have significant spillover costs for organizations in the form of compromised employee performance, it concurrently demonstrates that employing organizations are well-positioned to minimize such costs through programs that enhance employee financial well-being.

6 LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

While the findings provide compelling evidence for the negative effect of employees' financial worry on work performance, there are several limitations to the studies. First, in both studies, the focus is on the impact of employees' financial standing and worry on driving. Driving performance was used because it is directly consequential for both individuals and organizations and can be attributed to individual employees. However, it would be expected that financial worry can undermine performance on any number of tasks. Future research could examine the influence of financial worry on tasks where there is more interdependency to fully understand the task characteristics that attenuate or strengthen the evidenced effects.

Second, although the studies offer important evidence for a relationship between financial worry and work performance, future research could use exogenous financial shocks to further examine the nature of these effects. More specifically, research could examine the implications of windfalls from tax returns or financial depletion from a large unexpected expense. However, given the importance of subjective appraisals in the relationship between personal finances, cognitive capacity, and performance, the findings, in addition to those reported by Carvalho et al. (2016), suggest that such studies should focus on differences in financial worry rather than just observing the direct effects from exogenous shocks to employees' financial standing.

Third, it was only possible to examine the influence of emotional suppression in the first study. While Study 1 offers evidence for an additional explanatory mechanism between financial worry and cognitive capacity, future research should causally replicate the finding and investigate the conditions under which the indirect effect of emotional suppression may be more or less pronounced. For example, the extent and frequency with which people suppress the emotional experience of financial worry may be influenced by dispositional (e.g., self-

monitoring – Snyder, 1974) and situational (e.g., job interdependence) factors that enhance its impact on cognitive capacity and subsequent work performance. Thus, although Study 1 provided initial evidence for emotional suppression as an additional mechanism tying financial worry to cognitive capacity and performance, this finding also presents a fruitful area for future inquiry.

Finally, while the studies demonstrate a dampening effect of financial worry on performance through decrements in employees' cognitive capacity, prior research suggests that such worry might also motivate performance (e.g., Higgins, 1998; Menges et al., 2016; Shoss & Probst, 2012). Given the focus on ability as the mechanism of interest, Essay 2 did not directly examine the interaction of motivation and ability. In Study 2, however, participants were strongly incentivized to succeed, yet still experienced decrements in performance because of the dampened ability associated with financial worry. Future research should investigate the interplay between the effect of financial worry on performance motivation and ability, and the conditions under which each may be strengthened or attenuated.

7 CONCLUSION

In two contexts, this essay demonstrates the value of considering money in work outcomes beyond its motivational potential. Specifically, it shows how financial worry can impede people's ability to perform at work. If companies favor work practices that increase financial uncertainty for employees (Pfeffer, 2010), they are likely to contribute to the endurance of financial worry among a large portion of the population. By linking people's personal financial standing to their job performance, Essay 2 illustrates that employers, as well as employees, can

incur the costs of employees' financial worry. In this regard, the findings suggest that companies may have a significant stake in the financial well-being of their workforce.

ESSAY 3: THE IMPACT OF FINANCIAL STANDING ON SELECTION FOR PERFORMANCE OPPORTUNITIES

ABSTRACT

Essay 3 explores the effect of financial standing on selection for performance opportunities. Specifically, this essay examines whether a candidate's financial standing impacts decision-makers' competence evaluations, and consequently, the candidate's likelihood of selection for a valued opportunity. These relationships are investigated using a series of 4 exploratory controlled experiments. Study 1 and 2 find that financial standing, manipulated by a candidate's credit score information, influences how decision-makers rated the candidate's competence, and as a result, affects her probability of selection for a job interview. Moreover, Study 2 indicates that decision-makers' belief in the fixedness of dispositions and prevention focus do not have a significant moderating influence on this effect. Study 3 also finds that a candidate's socio-economic background did not significantly moderate this pattern. Finally, Study 4 demonstrates that financial standing, manipulated by the condition of the candidate's car, decreases the probability of selection for a partner task mediated by competence evaluations. The presence of an experience advantage did not significantly influence this relationship. Overall, the findings of these studies provide initial evidence for a relationship between a person's financial standing and selection for performance opportunities mediated by perceived competence.

A nascent literature in psychology and economics has emerged arguing that being in poor financial standing can lead people to behave in ways that promote lengthening its experience (Mullainathan & Shafir, 2013; Shah, Mullainathan, & Shafir, 2012; Vohs, 2013). That is, a poor financial standing may have psychological consequences that promote the sustenance of an impoverished state (Bertrand, Mullainathan, & Shafir, 2004; Vohs, 2013). This program of research has argued that people in poor financial standing tend to focus on their insufficiency (Mullainathan & Shafir, 2013) and feel anxiety and stress over their situation (Haushofer & Fehr, 2014), which can have an impact on their cognitive functioning (Mani, Mullainathan, Shafir, & Zhao, 2013; Hall, Shafir, & Zhao, 2014), the decisions they make (Shah et al., 2012), and their self-regulation (Spears, 2012). Meuris and Leana (2015) have further suggested that these psychological effects can spill over into work behavior, thus enhancing the disadvantage of those prone to being in poor financial standing due to its unintended indirect effects on their ability to perform.

Although this research has developed a clearer understanding of how individual differences in financial standing can impact human behavior, it has largely focused on its *intra-personal* consequences. Essay 3 departs from prior work in this domain by exploring whether a person's financial standing, or the financial standing she is perceived to have, can also have *inter-personal* consequences. That is, this essay investigates whether financial standing can have an impact on others' social judgments and the extent to which these judgments impact selection for valued professional opportunities. Thus, Essay 3 aims to empirically examine the indirect relationship between financial standing and opportunity, as well as the contextual conditions that may moderate it, hypothesized in Essay 1.

The studies reported in this essay offer several contributions to contemporary theory. First, although some research suggests that a person's financial standing can be positively related to the professional opportunities she receives, this work has primarily argued that the increase in opportunity arises from the social network that accompanies their socio-economic status (Campbell, Marsden, & Hurlbert, 1986; Lin, 1999; Lin & Dumin, 1986). This essay examines an additional mechanism that may underlie this relationship. Namely, controlling for individual differences in social connections, financial standing can serve as a cue of competence, and therefore, influence others' selection decisions (Cuddy et al., 2007, 2011). Thus, the studies reported in this essay build upon work by Bertrand and Mullainathan (2004) who found that candidates from poor areas, as indicated by zip code, were less likely to be invited for an interview. Essay 3 explains these findings by providing evidence regarding the role of competence evaluations in the relationship between financial standing and selection.

Second, Essay 3 expands the behavioral model of scarcity (Bertrand et al., 2004, 2006) by examining whether financial standing can have social psychological consequences complementary to the direct cognitive and emotional effects uncovered by prior research (e.g., Haushofer & Fehr, 2014; Mani et al., 2013; Mullainathan & Shafir, 2013). That is, this essay examines if people's financial standing has an impact on how other people behave toward them. Essay 3, therefore, demonstrates the need to further develop the behavioral model of scarcity across the intra-personal and inter-personal levels of analysis.

Finally, the hypothesized relationships are examined among potential candidates who are educated and qualified to complete the job or task relevant to the selection decision, and thus are less likely to carry the stigma associated with poverty. Although some research has linked poverty to perceptions of competence (e.g., Cozzarelli et al., 2001; Fiske et al., 2002), it has not

explicitly examined the relationship between financial standing and competence evaluations. Indeed, poverty combines a poor financial standing with a stigmatized status in society (Kraus et al., 2012), which is markedly different from people who are not necessarily low status but still are in poor financial standing (Leana & Meuris, 2015). More specifically, there are many people in society who are not in poverty but are in poor financial standing because unexpected negative economic shocks depleted their finances. As such, Essay 3 builds upon prior research in this domain by focusing specifically on the link between financial standing and perceived competence.

1 OVERVIEW OF STUDIES

In a series of exploratory experiments, the present research examines the hypotheses related to the indirect relationship between financial standing and selection for a performance opportunity mediated by competence evaluations proposed in Essay 1. As depicted in Figure 4, each experiment examines this indirect relationship after controlling for perceptions of warmth, the other primary dimension of social judgment (Cuddy et al., 2007), and performance expectations. Warmth was included to isolate the effect of financial standing on perceived competence. Namely, if decision-makers tend to internally attribute financial standing, one would expect that the manipulation of financial standing would affect perceived competence, but not perceived warmth. The studies further account for performance expectations because the impact of financial standing on performance ability proposed in Essay 1 and evidenced in Essay 2 may offer an additional mechanism that can account for the relationship between financial standing and selection. That is, exclusion may also result from decision-makers' anticipation of a

correlation between a candidate's financial standing and her performance ability. While general competence reflects perceived traits such as creativity, intelligence, and cleverness (Fiske et al., 2007), these social judgments are different from the anticipation of lower performance due to distraction. Thus, the anticipation of reduced performance ability may offer a parallel mediating mechanism to the indirect effect through perceived competence, which is controlled for in each of the experiments reported in this essay.

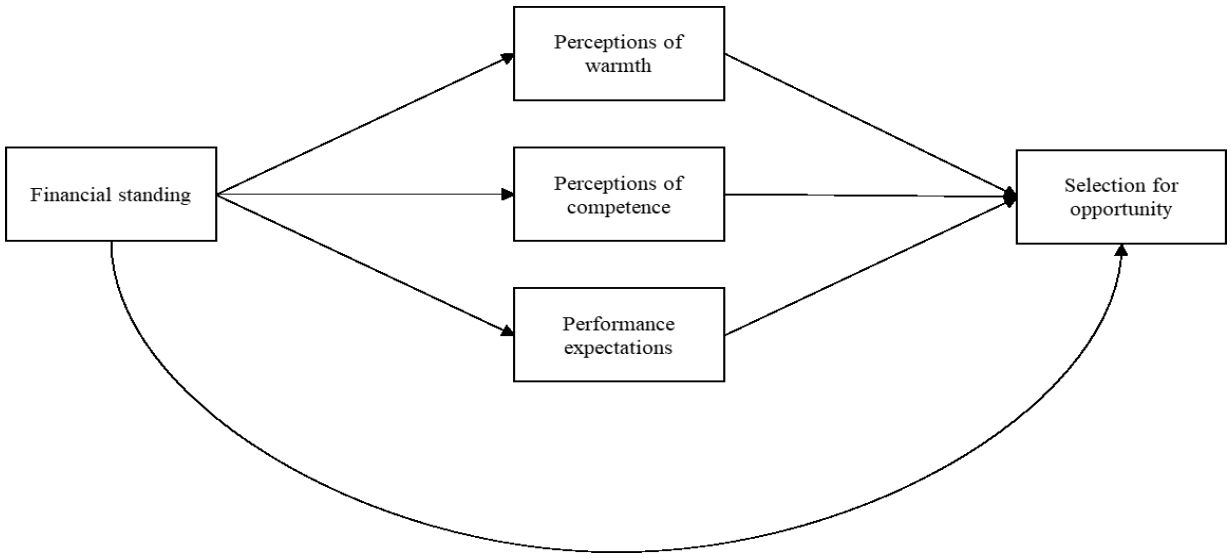

Figure 4. *Essay 3, Empirical model for Study 1-4*

The first experiment investigated the indirect effect of financial standing on selection mediated by perceived competence using a hypothetical hiring decision. Financial standing was manipulated by the candidate's credit score in relation to the population average. This information can be requested by an employer as part of the selection process in the United States,

thus providing mundane realism to the experimental procedures (Berkowitz & Donnerstein, 1982). Although some research has noted that credit scores can be linked to job performance by using credit scores as a measure of conscientiousness (Bernerth et al., 2012), the most comprehensive analysis of this relationship to date concluded that "in multiple different specifications, measures of credit status do not convey negative information about the character-related component of employee productivity" (Weaver, 2015: 765). Therefore, while credit scores may be assumed as a measure of competence and predictor of performance, empirical evidence does not support such an assumption.

The next experiment (Study 2) assessed the external validity of the relationships uncovered in Study 1 by replicating the procedures using participants who are currently or will be in positions with involvement in hiring decisions (MBA students). Study 2 also investigated the moderating effect of two decision-maker characteristics, lay beliefs regarding the malleability of dispositions and prevention focus, as hypothesized in Essay 1.

Study 3 further examined the moderating effect of candidate socio-economic background on the indirect relationship between financial standing and selection using the same paradigm as in Studies 1 and 2. Socio-economic background was manipulated by providing participants additional information from an initial telephone interview. Finally, Study 4 replicated the pattern identified in the prior studies in an incentivized team selection task with actual consequences of selected candidate performance to the participant and a less explicit cue of financial standing. That is, candidates' financial standing was manipulated by varying the condition of their cars. Moreover, Study 4 investigated the impact of an experience advantage over another candidate on the relationship between financial standing and selection.

2 STUDY 1

Study 1 examined a job candidate's likelihood of being selected for an interview given a below average, average, or above average credit score. Consecutively, participants were asked to rate a job candidate's perceived competence, perceived warmth, and performance expectations after reading a short biographical description.

2.1 Sample

Three hundred and one subjects (49% Female; M_{age} = 34.6, SD_{age} = 11.9) from the United States were recruited through Amazon's Mechanical Turk (MTurk) system to complete the study for compensation. Previous research has shown that MTurk provides results comparable to data collected from the lab (Buhrmester, Kwang, & Gosling, 2011; Casler, Bickel, & Hackett, 2013). In addition, MTurk is an appropriate avenue for the research question of interest because it provides access to a cross-national pool of participants with varied backgrounds and in various stages of life.

2.2 Procedures

At the beginning of the study, participants read select biographical information about a hypothetical job applicant:

In the following scenario, we would like you to imagine that you are a manager and are tasked with choosing which candidate to interview for an open position in your company. The position requires 2-4 years of job experience and a bachelor's degree.

Below you will find a description of a candidate for this position. Please carefully read the profile and answer the subsequent questions about it.

Profile
Name: Chris
Age: 26
Education: Bachelor's degree
Institution: State university
Work experience: 3 years
Financial credit rating: Below average

Each participant was randomly assigned to one of three conditions where the applicant had an above average, average, or below average credit score. After participants read the description, they were asked to indicate how likely it is that they would invite the candidate for an interview given the information they were provided. Subsequently, they were asked to rate the candidate on competence, warmth, and expected performance in counter-balanced order. Finally, participants answered demographic questions regarding their gender, age, and socio-economic status.

2.3 Measures

Perceptions of competence and warmth. Perceptions of warmth and competence were measured using a scale developed by Fiske et al. (2002), and consisted of *competent*, *intelligent*, *confident*, *efficient*, *skillful*, and *capable* for competence; *warm*, *sincere, friendly, well-intentioned, trustworthy,* and *good-natured* for warmth. Ratings for each dimension were derived from the extent to which participants believed a series of attributes were characteristic of the applicant on a 6-point scale ranging from (1) *Very uncharacteristic* to (6) *Very characteristic* and

were averaged to create a summary score of each dimension. The ratings of attributes related to each dimension indicated good internal consistency, Cronbach's α = .929 for competence and .928 for warmth.

Performance expectation. Participants were asked to predict how well the candidate would perform if selected for the position on a five-point scale ranging from (1) *Not well at all* to (5) *Extremely well*.

Dependent variable. After reading the candidate description, participants indicated the likelihood that they would call the candidate up for an interview on a six-point scale ranging from (1) *Very unlikely* to (6) *Very likely*.

2.4 Results

Manipulation check. At the end of the study, participants were asked to recall the candidate profile they received. There was a significant difference in the extent to which participants agreed with the statement "*Chris is experiencing financial difficulties*" between the below average (M = 6.22, SD = 1.19) and the two other conditions (average: M = 5.23, SD = 1.89; above average: M = 2.02, SD = 1.61), $t(1, 198) = -4.442$, $p < .001$; $t(1, 199) = -12.948$, $p < .001$. This manipulation check indicated that participants interpreted the credit score information as indicative of the candidate's financial standing.

Competence and selection. There was a significant difference in ratings of competence across the three conditions, $F(2, 298) = 5.828$, $p < .001$, $\eta^2 = .062$, but no significant difference in ratings of warmth, $F(2, 298) = .772$, $p = .320$, $\eta^2 = .008$. Simple effects show that a candidate with a below average credit score (M = 4.06, SE = .869) was perceived as less competent than a candidate with an average score (M = 4.25, SD = .733), $t(1, 198) = -1.657$, $p < .1$, and a candidate

with an above average score (M = 4.54, SE = .701), t(1, 199) = -4.294, p < .001. There was also a difference between a candidate with average and above average credit scores, t(1, 199) = -2.863, p < .01. Overall, these analyses suggest that a candidate's financial standing can influence their perceived competence, providing some support for Hypothesis 5.

The analyses further indicated that there was a significant difference in expectations of performance across the three conditions, F(2, 298) = 12.091, p < .001, η^2 = .075, consistent with the argument that decision-makers may exclude a candidate in anticipation that financial standing impact his or her performance ability. The candidate with the below average credit score (M = 3.28, SD = .842) was expected to perform worse than the candidates in the other two conditions, t(1, 198) = 2.814, p < .01; t(1, 199) = 4.720, p < .001. There also was a significant difference between the average (M = 3.58, SD = .654) and above average credit score conditions (M = 3.76, SD = .586), t(1, 199) = -2.083, p < .05.

In terms of selection, the credit score information significantly reduced the likelihood of invitation for an interview, F(2, 298) = 16.429, p < .001, η^2 = .099. The candidate with the below average credit score (M = 5.20, SD = 1.60) was significantly less likely to be invited for an interview than the candidates in the other two conditions, t(1, 198) = -3.303, p < .001; t(1, 199) = -5.260, p < .001. A candidate with an above average credit score (M = 6.14, SD = .813) was also significantly more likely to be interviewed than a candidate with an average credit score (M = 5.82, SD = .989), t(1, 199) = -2.497, p < .05.

Using Hayes' (2013) PROCESS macro, this study further examined whether the pattern in the dependent variable was simultaneously mediated by perceptions of competence, perceptions of warmth, and expectations of performance using a multiple mediation model. To this end, constructed bias-corrected 95% confidence intervals were calculated for the indirect

effect of condition on selection using a bootstrapping procedure with 10,000 resamples (Hayes, 2013; Preacher & Hayes, 2008). Results indicated a significant indirect effect of condition on the likelihood of interview selection mediated by performance expectations, as the confidence interval [95%CI = .009, .097] did not include 0. There was no significant indirect effect through perceptions of warmth for the likelihood of interview invitation [95%CI = -.003, .004]. Finally, in support of Hypothesis 6c, there was a significant indirect effect through perceived competence after accounting for the influence of perceived warmth and performance expectations [95%CI = .001, .040][16].

2.5 Discussion

The findings of Study 1 demonstrated that financial standing, manipulated by credit score information, influenced perceived competence and the probability of selection for an interview in a hypothetical hiring scenario. Mediation analysis indicated that financial standing separately influenced the likelihood of selection due to participants' performance expectations and their perceived competence. Collectively, Study 1 supported the hypothesized relationship between financial standing and performance opportunities mediated by perceived competence proposed in Essay 1. These effects were found after controlling for the variance in the relationship attributable to the anticipation of reduced performance and perceived warmth, and thus, offer a conservative estimate of the effect. Although Study 1 provided initial evidence for a relationship between financial standing and performance opportunities, it had two limitations that needed to

[16] I additionally examined whether participants' socio-economic status impacted the pattern of reported effects, as it is possible that low SES decision-makers will be more forgiving of below average credit scores. Respondents' socio-economic background did not significantly moderate the influence of the conditions of perceived competence, $F(2, 295) = .703$, $p = .496$, nor the effect of competence judgments on selection, $B = -.005$, $SE = .004$, $p = .198$. There was also no significant impact on the reported indirect effects.

be addressed. First, the study was conducted with MTurk workers who may be systematically different than people charged with making selection decisions. Second, the study did not examine any of the boundary conditions that may influence the internal attribution of competence and use of competence information in the selection decision. Therefore, a second experiment was conducted with MBA students to replicate the findings of Study 1 and investigate the impact of decision-maker characteristics on the relationship between financial standing and selection.

3 STUDY 2

3.1 Sample

One hundred and four MBA students from a northeastern university were recruited for a pen-and-paper survey. Participants were 46.2% female and had an average age of 30.5 (SD = 6.18).

3.2 Procedures

Study 2 used the same procedures and conditions as Study 1. Participants indicated the likelihood of selection of an interview for the hypothetical job candidate followed by their ratings of performance expectations, competence (Cronbach's α = .942), and warmth (Cronbach's α = .934) in counter-balanced order. Finally, participants completed two scales measuring their lay beliefs about the malleability of dispositions and prevention focus and demographic questions regarding their gender, age, and socio-economic background.

3.3 Measures

Decision-maker lay beliefs. To measure participants' lay beliefs regarding the malleability of dispositions, a three-item scale developed by Chiu and colleagues (1997) was used. The scale measures the extent to which people endorse the belief that a person cannot change who he or she is. Items consisted of "People can do things differently, but the important parts of who they are can't really be changed," "The kind of person someone is, is something very basic about them and it can't be changed very much," and "Everyone is a certain kind of person and there is not much that can be done to really change that." Participants rated the extent to which they agreed with each item on a 6-point scale ranging from (1) *Strongly disagree* to (6) *Strongly agree*. The scale had high internal consistency, Cronbach's α = .867.

Decision-maker prevention focus. Prevention focus was measured using the eighteen-item regulatory focus scale developed by Lockwood, Jordan, and Kunda (2002). Participants rated the extent to which each item was true of them on a nine-point scale ranging from (1) *Not at all true of me* to (9) *Very true of me*. Items included "In general, I am focused on preventing negative events in my life," "I am anxious that I will fall short of my responsibilities and obligations," and "I often worry that I will fail to accomplish my academic goals." The prevention focus scale had good internal consistency, Cronbach's α = .796.

3.4 Results

Manipulation check. At the end of the survey, participants were asked to recall the candidate profile they received. There was a significant difference in the extent to which participants agreed with the statement "*Chris is experiencing financial difficulties*" between the below

average (M = 4.06, SD = 1.19) and the two other conditions (average: M = 2.71, SD = 1.60; above average: M = 1.74, SD = .994), $t(1, 68) = 3.986$, $p < .001$; $t(1, 67) = 8.797$, $p < .001$.

Competence and selection. There was a significant difference in ratings of competence across the conditions, $F(2, 101) = 4.282$, $p < .05$, $\eta^2 = .078$, but no significant difference in ratings of warmth, $F(2, 101) = .321$, $p = .726$, $\eta^2 = .006$, consistent with Hypothesis 5. Planned simple effects indicated that a candidate with a below average credit score (M = 3.38, SD = .899) was perceived as less competent than a candidate with an average score (M = 3.65, SD = .781), $t(1, 68) = -2.231$, $p < .05$, and a candidate with an above average score (M = 4.16, SD = 1.03), $t(1, 67) = -3.518$, $p < .01$. There was also a significant difference between a candidate with average and above average credit scores, $t(1, 67) = -2.362$, $p < .05$. In contrast to Study 1, there was no difference in expectations of performance among the three conditions, $F(2, 101) = .510$, $p = .602$, $\eta^2 = .010$.

The analyses further indicated that the credit score information significantly reduced the likelihood of invitation for an interview, $F(1, 101) = 3.840$, $p < .05$, $\eta^2 = .071$. The candidate with the below average credit score (M = 4.43, SD = 1.48) was less likely to be extended an invitation for an interview than the candidates in the other two conditions, $t(1, 68) = -2.186$, $p < .05$; $t(1, 67) = -2.557$, $p < .05$. A candidate with an above average credit score (M = 5.61, SD = 1.71) was also significantly more likely to be interviewed than a candidate with an average credit score (M = 5.20, SD = 1.47), $t(1, 67) = -2.552$, $p < .05$.

Mediation analyses indicated that, in contrast to Study 1, there was not a significant indirect effect of condition on the likelihood of invitation for an interview mediated by performance expectations, as the confidence interval [95%CI = -.037, .077] did included 0. There was no significant indirect effect through perceptions of warmth for the likelihood of interview

invitation [95%CI = -.135, .023]. Finally, as hypothesized, there was a significant indirect effect through perceived competence after accounting for the influence of perceived warmth and performance expectations [95%CI = .020, .373], consistent with the findings of Study 1.

Finally, this study investigated whether participants' belief regarding the malleability of dispositions and prevention focus impacted the reported findings by including them as moderators in the multiple mediation model. Participants' lay beliefs did not significantly moderate the relationship between financial standing and perceived competence, B = .026, SE = .081, p = .747. Moreover, lay beliefs did not significantly change the indirect effects, as the 95% confidence interval of the index of moderated mediation included 0 (Hayes, 2015), [95%CI = -.018, .248]. Participants' prevention focus also did not significantly moderate the relationship between perceived competence and selection, B = -.075, SE = .147, p = .610. Prevention focus further did not significantly change the indirect effect of financial standing, as indicated by the index of moderated mediation [95%CI = -.116, .049][17].

3.5 Discussion

Study 2 replicated some of the findings from Study 1 using a sample of MBA students. Namely, financial standing, manipulated by credit score information, had a significant effect on the candidate's perceived competence, which subsequently affected the likelihood of selection. This effect emerged after controlling for perceived warmth and expectations of performance ability

[17] To examine the robustness of these findings, several alternative models were used. First, the position of the moderating variable was changed (interaction between financial standing and prevention focus and interaction between perceived competence and lay beliefs). These models do not offer different findings from those reported. Second, promotion focus was included in the models examining the impact of prevention focus. Models including promotion focus also offered similar findings to those reported in the results section. Third, the interactions were examined without controlling for warmth and performance expectations. These analyses, however, offered the same findings as reported.

and examining differences in two decision-maker characteristics. In contrast to Study 1, however, there was no significant effect of financial standing on performance expectations. One possible explanation for this difference between studies is that MTurkers are themselves in poorer financial standing than the MBA students, which may increase the likelihood that MTurkers students anticipate the impact financial standing can have on the candidate's ability to perform. That is, MTurkers may have been more likely to imagine the impact of poor financial standing on performance ability because more of them have experienced it themselves. In support of this explanation, a comparison of the socio-economic status of the two samples indicated that the MBA student sample had a significantly higher mean SES (MBA = 57.7, MTurk = 41.5, $t(1, 403) = 8.14$, $p < .001$) and a more right-skewed distribution ($Kurtosis_{MBA}$ = .576 vs. $Kurtosis_{MTurk}$ = -.766) than the MTurk sample.

Moreover, the findings of Study 2 did not support the hypothesized moderating effect of decision-makers' belief in malleability of dispositions nor their prevention focus. It is possible that the limited amount of information provided in the candidate description made the credit score manipulation so salient that differences in dispositions did not significantly change the results. Indeed, the moderating effect of both decision-maker characteristics was in the predicted direction but was insufficiently strong to alter the effect of the credit score manipulation.

4 STUDY 3

Study 3 built upon the findings of the two prior studies by exploring whether a candidate's socio-economic background (hereafter referred to as SES) could influence the indirect relationship between financial standing and selection for performance opportunities. As stated in Essay 1,

candidates' socio-economic background may moderate the indirect relationship between financial standing and selection by affecting the likelihood of internal attribution. It was expected that a candidate with a below average credit score from a low socio-economic background will be viewed as more competent than one from a high socio-economic background, and thus, be more likely to be selected for an interview.

4.1 Sample

Three hundred and four participants (47% Female; M_{age} = 37.42, SD_{age} = 12.49) from the United States were recruited through Amazon's MTurk system for compensation.

4.2 Procedures

Study 3 used the same procedures as in the prior two studies with two exceptions (see Table 3 for conditions). First, Study 3 added an additional manipulation to the procedures by varying whether the candidate comes from a low or high socio-economic background. In the low socio-economic background condition, the candidate profile included "*In an initial telephone interview, it was mentioned that Chris' family did not have much growing up because Chris' father, a mechanic, struggled to find a long-term job*." Participants in the high socio-economic background condition had "*In an initial telephone interview, it was mentioned that Chris' family enjoyed a good life growing up because Chris' father was a doctor at the local hospital*" included with the profile. A third group of participants did not receive any information regarding socio-economic background to offer a comparison to the other groups. Second, Study 3 only used the below or above average credit score conditions without the average condition used in

Study 1 and 2 to increase the power of the comparisons given the two-by-three crossed design. As in Study 1 and 2, participants indicated the likelihood of inviting the candidate for an interview. Subsequently, participants rated the candidate on the competence and warmth items, provided their expectations of the candidates' performance in counter-balanced order followed by demographic questions regarding their gender, age, and own socio-economic background.

Table 3. *Essay 3, Study 3 conditions*

	No socio-economic background information	**Low socio-economic background**	**High socio-economic background**
Below average credit score			
Above average credit score			

4.3 Results

Manipulation check. There was a significant difference in the extent to which participants agreed with the statement "*Chris is experiencing financial difficulties*" between the below average ($M = 3.98$, $SD = .846$) and above average ($M = 1.99$, $SD = .857$), credit score conditions, $t(1, 298) = 17.06$, $p < .001$. Moreover, there was a significant difference in participants' agreement with the statement "*Chris is from a low socio-economic background*" across the three conditions, $F(2, 298) = 17.320$, $p < .001$, $\eta^2 = .098$. Participants agreed with the statement more in the low SES condition ($M = 3.91$, $SD = 1.04$) than in the other two conditions (High SES: $M = 1.70$, $SD = .837$: No SES info: $M = 2.34$, $SD = 1.01$), $t(196) = 16.489$, $p < .001$, $t(196) = 10.776$, $p < .001$.

Competence and selection. There was a significant difference in ratings of competence between the credit score conditions, $F(1, 298) = 25.788$, $p < .001$, $\eta^2 = .123$. There was also a significant effect of socio-economic background on perceived competence, $F(2, 298) = 4.893$, $p < .01$, $\eta^2 = .032$. However, there was no interaction between financial standing and SES in predicting ratings of competence, $F(2, 298) = 1.005$, $p = .367$, $\eta^2 = .007$. Simple effects show that a candidate with a below average credit score was perceived as less competent than a candidate with an above average score in the no SES information ($M = 3.84$ vs. $M = 4.59$, $t(1, 100) = -4.686$, $p < .001$), low SES condition ($M = 4.28$ vs. $M = 4.82$, $t(1, 98) = -3.450$, $p < .01$), and high SES condition ($M = 4.23$ vs. $M = 4.68$, $t(1, 100) = -2.988$, $p < .01$).

A similar analysis on perceptions of warmth revealed a main effect of financial standing, $F(1, 298) = 14.377$, $p < .001$, $\eta^2 = .035$, and a main effect of SES, $F(2, 298) = 5.281$, $p < .01$, $\eta^2 = .034$. Again, there was no interaction effect, $F(2, 298) = .522$ $p = .594$, $\eta^2 = .003$. A candidate with an above average credit score was rated as less warm than a candidate with a below average credit score regardless of SES information (M = 4.11 vs. M = 4.45, $t(1, 300) = 3.718$, $p < .001$). Concurrently, the candidate in the low SES condition was also rated significantly warmer than the candidate in the high SES condition (M = 4.52 vs. M = 4.24, $t(1, 208) = 2.652$, $p < .01$) or when no SES information was provided (M = 4.52 vs. M = 4.09, $t(1, 202) = 3.928$, $p < .001$) regardless of credit score condition.

There also was a significant difference in expectations of performance among the credit score conditions, $F(1, 298) = 25.351$, $p < .001$, $\eta^2 = .137$, and a significant main effect of SES on performance expectations, $F(1, 298) = 7.310$, $p < .001$, $\eta^2 = .047$, but no significant interaction effect, $F(2, 298) = 1.841$, $p = .160$, $\eta^2 = .012$. The candidate with the below average credit score ($M = 2.59$, $SD = .815$) was expected to perform worse than the candidate with the above average

credit score (M = 3.99, SD = .673) regardless of socio-economic background information, t(1, 302) = -6.780, p < .001. A candidate from a low socio-economic background (M = 3.90, SD = .798) was also expected to perform better than the candidate from a high socio-economic background (M = 3.69, SD = .740, t(1, 200) = 2.596, p < .05) and the candidate without SES information (M = 3.50, SD = .796, t(1, 200) = 3.632, p < .001). There was a marginally significant difference between the candidate without any information regarding socio-economic background and the candidate in the high SES condition, t(1, 202) = -1.702, p < .1.

Credit score information significantly reduced the likelihood of invitation for an interview, F(1, 298) = 92.996, p < .001, η^2 = .126. There was also a significant main effect of SES on selection, F(2, 298) = 9.586, p < .05, η^2 = .029. Finally, there was no significant interaction between financial standing and socio-economic background, F(2, 298) = 1.503, p = .224, η^2 = .010. The candidate with the below average credit score (M = 4.84, SD = 1.606) was significantly less likely to be invited for an interview than the candidate with the above average credit score (M = 5.95, SD = 1.358) regardless of socio-economic background information, t(1, 302) = -6.505, p < .001. A candidate from a low socio-economic background (M = 5.75, SD = 1.417) was also significantly more likely to be interviewed than a candidate from a high socio-economic background (M = 5.29, SD = 1.519), t(1, 200) = 2.204, p < .05. Candidates without any information regarding socio-economic background (M = 5.15, SD = 1.754) were further less likely to be invited for the interview than the low SES condition, t(1, 200) = 2.684, p < .01, but not the high SES condition, t(1, 202) = -.640, p = .523.

Finally, this study investigated whether socio-economic background moderated the indirect effect of financial standing on the likelihood of selection for the interview using a moderated multiple mediation model, as in Study 1 and 2. The index of moderated mediation

(Hayes, 2015) indicated that the SES information did not significantly impact the indirect effect of financial standing on selection through competence [-.013, .066], warmth [-.010, .029], or performance expectations [-.017, .131]. After controlling for performance expectation and perceived warmth, there was a significant indirect effect of financial standing on selection through competence (No information = [.019, .210], low SES = [.020, .204], high SES = [.024, .242]) and performance expectations (No information = [.060, .244], low SES = [.033, .180], high SES = [.081, .337]) regardless of SES information, consistent with the findings of Study 1. In contrast, there was no indirect effect through warmth regardless of SES information. Therefore, Study 3 provides further support for Hypothesis 6c, but not the moderating effect of socio-economic background on the indirect relationship between financial standing and selection (Hypothesis 8b).

4.4 Discussion

The results from Study 3 supported the findings of the prior studies. Namely, financial standing affected the likelihood of selection for an interview mediated by evaluations of competence and performance expectations. The significant indirect effect through performance expectations in this study further supports the assertion that the lack of this relationship in Study 2 resulted from differences between how MBA students and MTurkers evaluated the candidates. Moreover, the results did not support a moderating effect of socio-economic background on the observed patterns of the previous studies. There was, however, a consistent main effect of SES so that the candidate from the low socio-economic background was viewed as more competent, warmer, expected to perform better, and was more likely to be selected than candidates in the other two conditions regardless of financial standing. Therefore, the provision of SES information can

increase favorable evaluations and the probability of selection but does not necessarily reduce the impact of financial standing. As in Study 2, it is possible that the limited amount of information provided in the candidate description made the credit score manipulation so salient that differences in socio-economic background did not significantly moderate the effect of financial standing.

5 STUDY 4

Study 4 was conducted to examine the hypotheses in a context where there is an actual consequence to a participant's selection decision. In this study, participants were asked to select a partner for an incentivized task based on manipulated information regarding two potential partners. Furthermore, Study 4 investigated the moderating influence of an experience advantage on the hypothesized relationships.

5.1 Sample

Three hundred and twenty participants (47% female; M_{age} = 31.8, SD_{age} = 10.38) from the United States were recruited through Amazon's MTurk system for $1 compensation. Two participants were excluded for incomplete data leaving a sample of three hundred and eighteen participants used in the analyses.

5.2 Procedures

Participants initially answered a series of questions related to their gender, age, home state, car make and model, car condition (1 to 6), and experience in trivia-related games. After answering these questions, all participants were led to believe that they would be randomly assigned one of two roles: (a) a decision-maker who must choose a partner for a joint trivia-related task or (b) a candidate for another MTurker. However, all participants were assigned as decision-makers. They were instructed that they will be asked to complete 10 difficult "Are you smarter than a 5th grader" questions but would need to choose a partner from two MTurkers who assumed the role of the candidate. The extent to which their selected candidate performs on the tasks was made consequential by attaching pay-off to group performance in the experiment. For each question the participant and her supposed partner answered correctly, there was a 10-cent bonus. If the participant and her partner both answered all questions correctly, it would double their pay-off from study completion. To help them with their selection decision, each participant was provided with the manipulated answers from two hypothetical candidates to the questions the participant had answered prior.

Candidate descriptions (see Table 4) remained constant across the two conditions except for their car description, which was used as a proxy for candidates' financial standing (e.g., Gino & Pierce, 2010) and ranged from (1) *Very Poor* to (6) *Very Good*, and their experience with trivia-related games on a scale ranging from (1) *Never* to (7) *Daily*. The manipulation of financial standing resulted in two conditions. In the first experimental condition, participants' first candidate had a "Toyota" from 2012 and rated the condition of their car as a 5 on the six-point scale while the other candidate drove a "Nissan" from 2015 and rated the condition of their car as a 2. In the second experimental condition, the first candidate rated the condition of their

car as a 2 while the other candidate rated the condition of their car as a 5 to examine whether a reversal in financial standing equated to a reversal in the observed effect.

As shown in Table 4, participants randomly assigned to the two experimental conditions described above were further randomized to three experimental conditions related to the manipulation of experience information. In the first condition, both candidates indicated that they never play trivia-related games, thus serving as a control condition. Participants assigned to the second condition were told that the first candidate played trivia-related games 2-3 times per week (a 6 on the scale) while the other candidate only played trivia-related games once a month (a 3 on the scale). In the third experimental conditions, the first candidate played games once a month while the other candidate played them 2-3 times per week. After reading the descriptions, participants selected their partner for the trivia task. Subsequently, they assessed each candidate on the competence, warmth, and performance expectation as in the prior studies. The order in which participants rated each partner candidate was counterbalanced.

Table 4. *Essay 3, Study 4 conditions and manipulations*

	No experience advantage	**Candidate 1 experience advantage**	**Candidate 2 experience advantage**
Candidate 1 has poor financial standing/ Candidate 2 has good financial standing	*Partner candidate 1: MTurk ID# A1CC1ESUM2JWJ2* Age: 25 Home state: Oregon Have a car: Yes Year: 2012 Model: Toyota **Condition (1=Very bad; 6=Very good): 2** **How often do you play trivia-related games: Never** *Partner candidate 2: MTurk ID# A3QGNYMQNUC6HM* Age: 24 Home state: Washington Have a car: Yes Year: 2015 Model: Nissan **Condition (1=Very bad; 6=Very good): 5** **How often do you play trivia-related games: Never**	*Partner candidate 1: MTurk ID# A1CC1ESUM2JWJ2* Age: 25 Home state: Oregon Have a car: Yes Year: 2012 Model: Toyota **Condition (1=Very bad; 6=Very good): 2** **How often do you play trivia-related games: 2-3 times per week** *Partner candidate 2: MTurk ID# A3QGNYMQNUC6HM* Age: 24 Home state: Washington Have a car: Yes Year: 2015 Model: Nissan **Condition (1=Very bad; 6=Very good): 5** **How often do you play trivia-related games: Once a month**	*Partner candidate 1: MTurk ID# A1CC1ESUM2JWJ2* Age: 25 Home state: Oregon Have a car: Yes Year: 2012 Model: Toyota **Condition (1=Very bad; 6=Very good): 2** **How often do you play trivia-related games: Once a month** *Partner candidate 2: MTurk ID# A3QGNYMQNUC6HM* Age: 24 Home state: Washington Have a car: Yes Year: 2015 Model: Nissan **Condition (1=Very bad; 6=Very good): 5** **How often do you play trivia-related games: 2-3 times per week**
Candidate 1 has good financial standing/ Candidate 2 has poor financial standing	*Partner candidate 1: MTurk ID# A1CC1ESUM2JWJ2* Age: 25 Home state: Oregon Have a car: Yes Year: 2012 Model: Toyota **Condition (1=Very bad; 6=Very good): 5** **How often do you play trivia-related games: Never** *Partner candidate 2: MTurk ID# A3QGNYMQNUC6HM* Age: 24 Home state: Washington Have a car: Yes Year: 2015 Model: Nissan **Condition (1=Very bad; 6=Very good): 2** **How often do you play trivia-related games: Never**	*Partner candidate 1: MTurk ID# A1CC1ESUM2JWJ2* Age: 25 Home state: Oregon Have a car: Yes Year: 2012 Model: Toyota **Condition (1=Very bad; 6=Very good): 5** **How often do you play trivia-related games: 2-3 times per week** *Partner candidate 2: MTurk ID# A3QGNYMQNUC6HM* Age: 24 Home state: Washington Have a car: Yes Year: 2015 Model: Nissan **Condition (1=Very bad; 6=Very good): 2** **How often do you play trivia-related games: Once a month**	*Partner candidate 1: MTurk ID# A1CC1ESUM2JWJ2* Age: 25 Home state: Oregon Have a car: Yes Year: 2012 Model: Toyota **Condition (1=Very bad; 6=Very good): 5** **How often do you play trivia-related games: Once a month** *Partner candidate 2: MTurk ID# A3QGNYMQNUC6HM* Age: 24 Home state: Washington Have a car: Yes Year: 2015 Model: Nissan **Condition (1=Very bad; 6=Very good): 2** **How often do you play trivia-related games: 2-3 times per week**

5.3 Results

Manipulation check. There was a significant difference in the extent to which participants agreed with the statement "*Partner candidate 1 is experiencing financial difficulties*" between the experimental conditions where Candidate 1 had a car in good condition ($M = 3.54$, $SD = 1.26$) and the experimental conditions where Candidate 1 had a car in bad condition ($M = 5.43$, $SD = 1.33$), $t(317) = -13.04$, $p < .001$. Moreover, there was a significant difference in participants' agreement with the statement "*Partner candidate 1 has experience in trivia-related tasks*" across the three experience conditions, $F(2, 316) = 228.05$, $p < .001$, $\eta^2 = .591$. Planned contrasts indicate that participants agreed more with the statement when partner Candidate 1 had an experience advantage ($M = 2.24$, $SD = 1.21$) than in the condition without an experience difference ($M = 6.02$, $SD = 1.27$), $t(210) = -22.22$, $p < .001$, or when Candidate 2 had an experience advantage ($M = 3.81$, $SD = 1.40$), $t(213) = -8.84$, $p < .001$. Conversely, there also was a significant difference in participants' agreement with the statement "*Partner candidate 2 has experience in trivia-related tasks*" across the three experience conditions, $F(2, 316) = 162.08$, $p < .001$, $\eta^2 = .506$. When partner Candidate 2 had an experience advantage, participants agreed more with the statement ($M = 2.57$, $SD = 1.49$) than when neither had experience ($M = 5.94$, $SD = 1.38$), $t(209) = -17.08$, $p < .001$, and when Candidate 1 had an experience advantage ($M = 3.56$, $SD = 1.32$), $t(213) = -5.14$, $p < .001$.

Competence and selection. A mixed ANOVA indicated an interaction between the financial standing manipulation and ratings of each candidate's competence, $F(1, 317) = 43.686$, $p < .001$, $\eta^2 = .121$. When Candidate 1 was in poorer financial standing, she was rated as less competent ($M = 3.92$, $SD = .823$) than Candidate 2 ($M = 4.36$, $SD = .856$), $t(161) = -4.183$, $p < .001$. In contrast, when Candidate 2 was in poorer financial standing, she was rated as less

competent (M = 3.99, SD = .858) than Candidate 1 (M = 4.21, SD = .814), $t(161) = 2.663$, $p < .01$. There was also a significant interaction between financial standing and within-participant ratings of each candidate's expected performance, $F(1, 317) = 4.145$, $p < .05$, $\eta^2 = .013$. When Candidate 1 had poorer financial standing, she was expected to perform worse (M = 3.85, SD = .893) than Candidate 2 (M = 4.02, SD = .906), $t(156) = 3.176$, $p < .01$. In contrast, when Candidate 2 had poorer financial standing, she was expected to perform worse (M = 3.98, SD = .840) than Candidate 1 (M = 4.16, SD = .867), $t(156) = -3.206$, $p < .01$. There was no significant effect of financial standing on ratings of warmth, $F(2, 311) = .003$, $p = .977$, $\eta^2 = .003$.[18]

Finally, a moderated multiple mediation model was used to examine the indirect relationship of financial standing on selection and the moderating influence of experience information. In predicting the probability of selection, an experience advantage did not significantly moderate the direct effect of the financial standing manipulation, $B = -.222$, SE = .430, $p = .606$, perceived competence, $B = .041$, $SE = .360$, $p = .909$, or perceived warmth, B = -.632, $SE = .359$, $p = .078$. The interaction between performance expectations and experience information, however, was significant, $B = .747$, $SE = .228$, $p < .05$. Regardless of experience information, performance expectations had a significant impact on the probability of selection, but this effect was stronger in the conditions where Candidate 1, $B = 1.219$, $SE = .196$, $p < .001$, or 2, $B = 1.805$, $SE = .339$, $p < .001$, had an experience advantage compared when there was no difference in experience, $B = .633$, $SE = .165$, $p < .001$.

The index of moderated mediation (Hayes, 2015) further shows that there was no significant influence of experience information on the indirect effect of financial standing on the

[18] Experience information did not impact the pattern or significance of the results reported. A three-way mixed ANOVA examining the interactive effect of the two manipulations and within-subjects differences in perceived competence, $F(2, 313) = .629$, $p = .629$, $\eta^2 = .003$, perceived warmth, $F(2, 313) = .464$, $p = .629$, $\eta^2 = .003$, and performance expectations, $F(2, 311) = .254$, $p = .776$, $\eta^2 = .002$.

probability of selection through competence [95%CI = -.748, .535], warmth [95%CI = -.031, .542], and performance expectations [95%CI = -.499, .427]. Bootstrapping of the indirect effects revealed that there was a significant indirect effect of financial standing on the probability of selection through perceived competence [No experience information: -1.48, -.248; Candidate 1 experience advantage: -1.45, -.324; Candidate 2 experience advantage: -2.10, -.205] and performance expectations [No experience information: -.404, -.067; Candidate 1 experience advantage: -.598, -.025; Candidate 2 experience advantage: -.984, -.056] but not warmth regardless of experience condition. Therefore, the results supported the indirect relationship between financial standing and selection through competence evaluations (Hypothesis 6c), as in the prior studies, but do not support a moderating effect of task experience (Hypothesis 10a and 10b).

5.4 Discussion

Study 4 replicated the indirect influence of financial standing on selection mediated by perceived competence supported in Study 1, 2, and 3. Interestingly, an experience advantage did not significantly change the pattern of this indirect effect, suggesting that task-specific experience may not offset the impact of perceived competence resulting from differences in financial standing. This finding suggests that people in poor financial standing may be disadvantaged even when they have a significant experience advantage over other candidates vying for the same opportunity. Conversely, candidates in good financial standing may be preferred over other candidates even when their task experience is limited.

6 GENERAL DISCUSSION

Using a series of four exploratory studies, Essay 3 examined the impact of financial standing on the probability of selection for a performance opportunity. Table 5 depicts a summary of the findings of each study in relation to the hypotheses developed in Essay 1. Across the four studies, this essay found support for an indirect relationship between financial standing and selection mediated by competence evaluations after controlling for perceptions of warmth and expectations of performance. This relationship replicated with a sample of MBAs (Study 2) and when there are monetary consequences to the selection decision (Study 4). In addition, there was an indirect effect of financial standing through performance expectations in the studies using a MTurk sample but not in Study 2 using responses from MBA students. As noted, one potential explanation for this difference is that MTurk participants may have an easier time imagining the negative effect of a poor financial standing on performance ability than MBA students.

Furthermore, the moderating conditions proposed in Essay 1 did not have a significant impact of the indirect relationship between financial standing and selection. One potential reason for the lack of significant moderating effects is that the limited amount of additional information included in the candidate descriptions enhanced the salience of the financial standing manipulations. An advantage of limiting the additional information included in the candidate descriptions is that it allowed this essay to explore the isolated effect of financial standing on selection. However, such an approach simultaneously can enhance the strength of any effect attributable to financial standing that limits the extent to which boundary conditions can significantly alter this effect. Therefore, the studies reported in this essay provide some initial evidence for a relationship between candidates' financial standing and selection for performance opportunities, but more research is necessary to further explore the dynamics of this relationship.

Table 5. *Summary of Essay 3 findings*

	Study 1	Study 2	Study 3	Study 4
Hypothesis 5: Effect of financial standing on competence	X	X	X	X
Hypothesis 6a: Effect of financial standing on selection	X	X	X	X
Hypothesis 6b: Effect of competence on selection	X	X	X	X
Hypothesis 6c: Indirect effect of financial standing on selection mediated by competence	X	X	X	X
Hypothesis 7a: Moderation of lay beliefs on the effect of financial standing on competence		O		
Hypothesis 7b: Moderation of lay beliefs on the indirect effect of financial standing		O		
Hypothesis 8a: Moderation of prevention focus on the effect of competence on selection		O		
Hypothesis 8b: Moderation of prevention focus on the indirect effect of financial standing		O		
Hypothesis 9a: Moderation of SES on the effect of financial standing on competence			O	
Hypothesis 9b: Moderation of SES on the indirect effect of financial standing			O	
Hypothesis 10a: Moderation of experience on the effect of competence on selection				O
Hypothesis 10b: Moderation of experience on the indirect effect of financial standing				O

X: Confirmed Hypothesis; O: Rejected Hypothesis

The findings presented in this essay offer several directions for future research. First, the hypothesized effects should be examined with more information provided. In the reported studies, minimal information was provided beyond basic demographic information and the

financial standing manipulation. This approach was necessary to examine how decision-makers behaved towards candidates based upon their financial standing. However, more studies are necessary that expand the information available to the decision-maker to more closely resemble a realistic selection decision and ensure the relationships identified in this essay are not the result of limiting the information provided to decision-makers. Future research, for example, could provide subjects with a manipulated job application to examine whether the information suggestive of the candidate's financial standing is attended to and used in their selection decisions.

Second, all experiments reported in this essay were conducted in a controlled setting. These experiments were necessary to establish a relationship between a person's financial standing and selection for performance opportunities mediated by competence evaluations. However, these findings need to be investigated in a natural organizational context where there may be moderating conditions beyond those tested in the current essay (Staw, 2010). Relatedly, while Study 2 replicated the findings using a sample of MBA students and Study 4 attached a consequence to the selection decision, these relationships need to be examined using samples of managers making consequential decisions for their organization. One potential avenue for future research is to use hiring or promotion data and decision-maker surveys to examine the extent to which cues of financial standing affect decision-makers' selection decisions and the decision-maker characteristics that may moderate this effect.

Third, future research should examine the role of warmth in the effect of financial standing on selection. Three of the four studies (except Study 3 which included socio-economic background information) reported in this essay found that information suggestive of a candidate's financial standing does not influence their perceived warmth. However, since

warmth is often considered to have primacy over competence in approach motivation (e.g., Abele et al., 2008; Casciaro & Lobo, 2008; Cuddy et al., 2011), it is possible that if candidates can enter the interview stage, perceived warmth becomes more important in determining selection while the effect of financial standing on perceived competence may be more consequential at the initial application stage. Therefore, it is necessary to look at whether financial standing plays a role in the final selection decision after inter-personal contact with the decision-maker. For example, it is possible that financial standing predicts selection for an interview but not the eventual selection decision.

7 CONCLUSION

Essay 3 examined the impact of a person's financial standing on the performance opportunities they receive. While research on the role of money on employee performance has often focused on its potential as a motivational lever (Leana & Meuris, 2015), Essay 3 examined whether it can also have an influence on performance opportunity, as hypothesized in Essay 1. Four exploratory studies provided initial evidence for a relationship between financial standing and selection decision. However, additional research is necessary to further investigate the dynamics of this relationship and its external validity. Overall, this essay contributes to understanding how people's financial standing can affect performance opportunities and provide a basis for future research in this domain.

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