

**A PENNY FOR YOUR THOUGHTS: THE PSYCHOLOGICAL EFFECTS OF  
PAYDAY**

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The Academic Faculty

By

Laurens Bujold Steed

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PAYDAY**

Approved by:

Dr. Brian W. Swider, Chair  
Scheller College of Business  
*Georgia Institute of Technology*

Dr. Terry C. Blum  
Scheller College of Business  
*Georgia Institute of Technology*

Dr. Dong Liu  
Scheller College of Business  
*Georgia Institute of Technology*

Dr. Eugene Kim  
Scheller College of Business  
*Georgia Institute of Technology*

Dr. Jennifer Carson Marr  
R. H. Smith School of Business  
*University of Maryland*

Date Approved: May 23, 2018

## **DEDICATION**

To Thomas and Mollie, who make life more fun.

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As they are wont to do, this temporal landmark has led me to reflect on the past five years and who I have become during (and because of) the course of this PhD journey. I've spent a fifth of my life to date as a doctoral student, and this undertaking has changed, challenged, and pushed me in ways I never could have anticipated. I could not have made it to this point without the support of many individuals from all of the various components of my life. I firmly believe it takes a village to develop a PhD student, and indeed it took me a rather large and extensive one. Each of these individuals, my collective village, deserves acknowledgement for the important roles they have played in my development as a person, scholar, or both, during the course of my graduate studies.

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## SUMMARY

Making an income is a primary reason why individuals seek paid employment. Further, money in itself has been shown across multiple literatures to be critically important to life and substantially influence a host of individual attitudes and behaviors. This research seeks to investigate the employee-employer exchange of money in the form of payday to uncover whether individuals experience meaningful variations in attitudes and behaviors that coincide with paydays. To explore and illuminate the potential effects of payday in the workplace, I integrate across the currently disparate literatures on compensation, temporality and temporal landmarks, and the psychology of money. In doing so, I position payday theoretically as a compensation event that recurs with regularity and yet meaningfully stands out (i.e., a temporal landmark) with significant psychologically-driven consequences. Specifically, integrating findings from these distinct literatures, I hypothesize that payday has meaningful effects on an individual's sense of personal control, and that this sense of control mediates the relationship between payday and the outcomes of self-efficacy, stress, citizenship behaviors directed interpersonally and organizationally (i.e., OCB-Is and OCB-Os) and recovery experiences. A between-person archival study of Google search data in Sweden (Study 1) indicates that payday meaningfully stands out to individuals and thus may be considered as a temporal landmark. A within-person study of employees over three paydays and three non-paydays (Study 2) fails to find support for the meaningful effects of payday in organizational life. Theoretical and practical implications of these findings and directions for future research are discussed.

# **CHAPTER 1**

## **INTRODUCTION**

Income is a critical aspect to life in and out of organizations for workers. Indeed, as is noted by Leana & Meuris (2015, p.56), “few factors are as essential to individual well-being as is income”. Despite this criticality, income has received scant attention as a driver of employee attitudes or behaviors in the workplace. Research on the psychological underpinnings of money in behavioral economics and psychology have illustrated the important, even visceral effects that money may have on individual perceptions and behaviors, and have similarly demonstrated that these effects can often be outside of the conscious awareness of individuals (Leana & Meuris, 2015; Lea & Webley, 2006; Vohs, Mead, & Goode, 2008; Furnham, 2014). Yet, this research remains largely unintegrated into the larger organizational literature. Even work on compensation in human resource management remains scant as compared to other areas of focus in the field (Gupta & Shaw, 2014). As the context in which money is earned, an examination of the work relationship between employer and employee provides a fruitful, yet largely neglected, avenue with which to better investigate the psychological effects of money and income on employees.

Extant research on compensation and financial incentives has focused on how pay and financial incentives drive individual performance (i.e., pay-for-performance) and influence employee motivation at work, with the evidence largely supporting the idea that incentives effectually influence employee performance behaviors at work (Shaw & Gupta, 2015). However, despite this, the question of how employee attitudes and other

non-performance relevant behaviors might be influenced by money has been largely ignored by scholars (Leana & Meuris, 2015). The primary role that money plays in everyday life, in addition to the burgeoning research in psychology demonstrating the effects that money has on the subconscious, underscores the importance of a second look at how money might influence employees right at the source where earning is the most salient: the workplace. Therefore, in this research, I seek to examine how even small pay-relevant events (paydays) might influence employees attitudes and behaviors both in and outside of work.

Work on the effect of paydays, while limited, has several key findings that lend to the idea that these “temporal landmarks” have important influences on individual decision making outside of the work context. Research has indicated, perhaps unsurprisingly, that consumer consumption tends to increase after a payday; however, findings indicate that households “exhibit excess sensitivity” to being paid beyond expected spending for normal household expenditures (Stephens, 2006, p. 682). That is, it is not just that consumers have the resources to make purchases they may have been delaying. Money causes a meaningful, and to an extent irrational change in the way people think and their subsequent behaviors. Relatedly, pay cycles (e.g., biweekly or monthly) have shown to differentially influence the way individuals perceive opportunity costs in spending (Spiller, 2011). According to this research, individuals with longer pay cycles are less likely to consider opportunity costs in their spending, highlighting how just the reminder of being paid (e.g., not actually receiving or spending physical funds) may influence one’s psychology. Finally, even death has been shown to increase immediately after income receipt, such that there exists a mortality cycle that is

influenced by the timing of payments (Evans & Moore, 2011; Andersson, Lundstrom, & Vikstrom, 2015). Taken together, this evidence suggests that the effects of paydays are real and meaningful, yet these relationships have been neglected in the organizational research.

The amount of money one is paid for their work has a substantial influence in how individuals make decisions about their working life, be it their choice of occupation or career, decisions about when or why to change jobs, and decisions about family life, highlighting the importance of considering income and pay in organizational literatures (Leana & Meuris, 2015). Further, research in psychology has demonstrated how even just the mention of money influences individual behavior, causing individuals to take on more work and persist for longer on challenging tasks without asking for help, while also reducing the extent to which they help others (Vohs, et al., 2008). These effects often occur even when individuals aren't even consciously aware that they are thinking about money, highlighting just how complex and potentially influential the human relationship to money is. In fact, Dr. Brian Knutson, one of a team of researchers who has investigated the effects of money using fMRIs to examine brain activity, drew the powerful conclusion that from a neuroscience perspective, "nothing had an effect on people like money – not naked bodies, nor corpses. It got people riled up." (as quoted in Sehgal, 2015)

The disparate literatures on money and payday suggest that both money itself and paydays as events have meaningful effects on cognitive processes and/or behaviors, and yet work has until now neglected to examine how these effects play out at work. Might employees think, feel, or behave differently at work on and around the day(s) in which

their pay (the receipt of money from their employer) is salient due to natural temporal rhythms (i.e., payday)? This research seeks to explore how paydays might activate this monetary salience and thus influence important cognitive, affective, and behavioral workplace outcomes. In examining the effects of payday, I utilize extant research on the psychology of money to build theory about the robust and meaningful effects money has on individuals. Extending the literature emphasizing the effects of money on self-sufficiency and other self-focused cognitions and behaviors (Vohs, 2015), I suggest a sense of personal control as the critical mediating mechanism through which the effects of payday are transmitted to several important workplace outcomes.

In this context, personal control consists of one's ability to exert mastery over their externalities and environment (Ryff, 1989). Specifically, consistent psychology's extensive findings about money's effects on interpersonal behaviors, cognitions, and well-being, I examine the effects of payday on job self-efficacy, stress, helping behaviors (i.e., OCB-Is and OCB-Os), and recovery experiences through this sense of personal control. In doing so, I seek to build a more coherent theory of the effects of money at work in its most common form, the payday. In the context of this dissertation, I define job self-efficacy as a belief in one's ability to reach certain attainments in the work domain specifically (Bandura, 1982); stress as a physiological response to a given stimulus characterized by arousal and anxiety (Folkman, 2013); organizational citizenship behaviors as those discretionary behaviors that contribute to the overall functioning of the organization outside of task performance behaviors, directed at either the organization (OCB-O) or other individuals (OCB-I; Organ, 1997; LePine, Erez, & Johnson, 2002); and recovery experiences as those specific experiences that employees

engage in outside of work that allow them to recuperate from the demands of work (Sonnentag & Fritz, 2007).

From a practical perspective, HR systems of compensation in corporate life have largely not yet caught up to technological advances that might allow for real-time or frequent payment. That is, this question of the effects of paydays and payday timing may have been a moot point in decades past, but with smartphones, digital banking, and financial start-ups broadly seeking to disrupt the way payments are made in everyday life, such a decision is now an increasingly viable alternative for companies. With the advent of technologies such as cryptocurrencies (e.g., Bitcoin) and Visa Fast Funds allowing for instantaneous payments (Pagliery, 2016), companies may soon be forced to decide *when* or *how often* to pay their employees; yet, the literature has been heretofore silent on the matter.

Accordingly, this dissertation seeks to make three important contributions to organizational literature and practice. First, investigating how the timing of paydays influences the attitudes and behaviors of employees seeks to answer Whetten (1989)'s "when" of theory. That is, although as Gupta and Shaw (2014) rightly point out that compensation and incentive systems are "among the most under-researched areas in HR" (p. 2), more is known about the what, how, and why of compensation. Financial incentives do influence performance, and can be delivered in multiple forms, such as bonuses or merit pay (Jenkins, Mitra, Gupta, & Shaw, 1998; Shaw, Duffy, Mitra, Lockhart, & Bowler, 2003). However, much remains to be answered. Does the timing and potential cyclicity of payday meaningfully impact important employee attitudes and behaviors? This dissertation seeks to answer this question. To do this, I will apply a

temporal landmarks framework – I postulate that employees see paydays as a specific temporal landmark, and I will explore whether and how these landmarks cause meaningful variation in employee attitudes and behaviors.

Second, by contextualizing money as income in the workplace relationship, this research seeks to integrate currently disconnected literatures. Because payday acts as a specific, recurrent and routinized event that involves one's payment for work and the exchange of money, I will integrate research on compensation in the field of human resource management and the burgeoning stream of literature on the psychology of money. By considering the psychological effects of compensation beyond just workplace motivation and performance behaviors, this research seeks to explore and extend important findings in psychology in their application to workplace phenomena. To date, the compensation literature has been decidedly separate from the extant literature exploring how money affects human behaviors, attitudes, and cognitions. This is an unfortunate oversight in that at its core, compensation is a receipt of money, and thus integration between these seemingly distinct literatures is sorely needed. I utilize money priming theory and work on the psychology of money as a framework in this study to uncover how individuals may experience this important compensation event in the workplace.

Third, I seek to theoretically position paydays as a “temporal landmark.” Temporal landmarks, which are defined as “distinct events that stand out in the everyday humdrum of life” (Peetz & Wilson, 2013, p. 250), serve to structure and organize one's experience of time, and in a greater sense, life. With around three-quarters of Americans living paycheck to paycheck (Gibson, 2016), payday likely stands out significantly to

much of the employed population. Yet, no existing research has explicitly framed the event of payday as such. Doing so may open up opportunities for future research on other payday effects, or similar temporal landmarks that employees might encounter on a regular basis that meaningfully influence fluctuations in employee attitudes and behaviors. Further, as mentioned above, unlike calendar rhythms and other naturally-occurring temporal landmarks, payday serves as a temporal landmark that organizations have discretion and latitude to manipulate. Thus, exploring payday's role as a temporal landmark serves to extend existing literature on temporal landmarks to consider this potentially malleable and important landmark that occurs in all organizations.

Finally, in addition to the aforementioned theoretical contributions, this research seeks to answer important questions relevant for practice. That is, I hope to uncover if and how pay timing decisions may drive important job attitudes or behaviors that are of interest for organizations. Additionally, because organizations now have increasing options and abilities to make pay decisions due to increased access to payroll automation, as well as a burgeoning digital marketplace for banking and fund transfer, an understanding of the effects of timing on pay days can have important implications for firms seeking to make decisions about how to optimally pay their employees beyond just a dollar amount perspective. Further, because researchers have suggested that "the effects of money on behavior are large and consistent" (Vohs, Mead, & Goode, 2006, p. 211), an understanding of a potential cyclicity of these effects may have important ramifications for how organizations choose to time and structure important work, decisions, and events so as to coincide or avoid the effects that may occur around payday.

## **CHAPTER 2**

### **THEORETICAL DEVELOPMENT**

#### **2.1 Theoretical Overview**

Because payday as a phenomenon is composed of a variety of complex factors that are interwoven within a single event (e.g., financial incentives, temporality and timing, and perceptions of money itself) I will begin by summarizing the relevant research and findings in each of these seemingly disparate literatures. In doing so, I will theoretically ground payday as 1) a compensation event that occurs regularly, thus acting as 2) a temporal landmark, with meaningful psychological ramifications due to it being 3) an exchange of and cue towards money. Further, I utilize money priming theory and the larger research on the psychology of money as an organizing framework with which to examine critical cognitive, affective, and behavioral outcomes of payday.

#### **2.2 Compensation**

While there is a paucity of research that examines the actual transactional exchange of pay for work (i.e., payday), compensation and financial incentives on the whole have certainly been a topic of focus, particularly in the field of Human Resources (HR). Despite its interest and relevance, compensation remains severely understudied relative to its standing as a paramount driver of human behavior in the workplace (Gupta & Shaw, 2014). This is likely not due to lack of interest from scholars or a lack of recognition of the topic's gravity. Instead, studies examining financial incentives can require attention to a host of complexities, including the dual literal and symbolic meanings of money in society, individual differences in money-related beliefs and

perceptions of its utility, and structural and fairness considerations within organizations and society at large, among others (Jenkins et al., 1998; Fuhman, 2014). These constraints are evident when one looks at the volume of compensation literature that exists relative to its importance in organizational life. Quite simply, studying financial incentives and compensation is difficult – it remains an area of research that is mired in confusion (Gerhart & Rynes, 2003). Adding to this complexity and confusion is the variety of terms and concepts used to describe the receipt of money and other rewards in exchange for work. The terms used in the academic literature and in practical accounting by organizations are not used consistently. Thus, I begin by defining these terms as they are used in this dissertation. *Financial incentives* refer to money given in order to motivate specific behavior (Jenkins et al., 1998). Financial incentives may be considered as performance-contingent and are often tied to behaviors that the organization values (e.g., bonuses or merit pay increases; Gupta & Shaw, 1998). I use the words *income* and *pay* interchangeably to refer to the money received in exchange for work done by an employee. Pay and income can be allocated as a *salary*, in which employees receive a set amount of money yearly, or *hourly*, in which employees are paid a set wage according to hours worked. According to the Bureau of Economic Analysis (2014), *compensation* refers to total income – that is, the pay for work, and the additional benefits, bonuses, financial incentives, or other forms of payment (e.g., stock options, equity, pension contributions) that an employee receives. However, much of the academic research on compensation refers only to the salary or wage level that the employee receives and ignores additional benefits, despite their value to employees (Gerhart, Milkovich, & Murray, 1992; Gerhart & Rynes, 2003).

A large portion of employed individuals work first and foremost so that they can make money to exchange for the resources needed sustain their lives and families (Dulebohn & Werling, 2007). Given this, researchers have looked at a variety of compensation-related variables to understand the underlying mechanisms and processes by which financial incentives drive motivation and behaviors across levels (i.e., individual, group, and organizational). Further, compensation research includes a substantial variety of topics, including the motivational aspects of pay (e.g., pay-for-performance, intrinsic vs. extrinsic motivation, family/provider motivations; Jenkins et al., 1998; Menges, Tussing, Wihler, & Grant, 2016), the structural and firm-level aspects of pay (e.g., pay systems, pay dispersion; Bloom & Michel, 2002; Shaw et al., 2002), the executive-specific application of pay (e.g., CEO pay and agency theory; Tosi & Gomez-Mejia, 1989), and the cognitive or attitudinal aspects of pay (e.g., pay satisfaction, pay fairness and equity theory; Currall, Towler, Judge, & Kohn, 2005; Judge, Piccolo, Podsakoff, Shaw, & Rich, 2010), among others. Scholars may lament a lack of depth of literature covering these topics, particularly in human resources (Gupta & Shaw, 2014), but because of the nature of compensation as an inherently relevant topic that is a critical component of the relationship between employee and employer (Dulebohn & Werling, 2007), there exists substantial interdisciplinary breadth. Work on compensation crosses human resources and organizational behavior, strategy, finance, sociology, economics, and other broader fields of social science. While it is beyond the scope of this dissertation to review the entirety of this research on compensation and financial incentives, an overview of the research around pay, and pay as a motivational factor in particular, is certainly merited.

An organization's approach to compensation generally considers both the *pay level* and the *pay structure* that an organization utilizes as a part of their overall *pay strategy* (Gerhart & Rynes, 2003). Pay level refers to variability in what an organization pays compared to other competing firms (Gerhart & Milkovich, 1992), whereas pay structure refers to variability in pay for jobs within a specific organization (Dulebohn & Werling, 2007). However, as Gerhart and Rynes (2003) note, in the empirical literature, pay level generally refers to the specific wage rate (that is, the given salary), and often does not account for benefits and other performance-contingent financial incentives (such as bonuses), which can be both extremely valuable to employees and vary significantly across employers. However, these portions of pay represent an important part of the overall compensation package that can serve to attract and retain employees (Milkovich & Newman, 1993; Mitchell & Mickel, 1999).

Firm-level compensation decisions are complex. Organizations must decide not only how much to pay relative to their costs, but in what form to pay. An organization may choose to offer base pay, where the employee receives a given and predictable salary, variable pay such as piecework rates or performance-contingent bonuses, or a combination of both (Gerhart & Milkovich, 1990). From a broader economic standpoint, firms must also compete in several markets, which guide decisions about how and how much to pay. Pay decisions are influenced by those of competitors, whereby organizations will seek to keep costs low (competition in the product market) as well as by similar firms who may attract potential labor (competition in the labor market; Gerhart Milkovich, & Murray 1992). The influence of these markets can vary significantly according to an organization's overall strategy and product offering. An organization

seeking to be a price leader would seek to minimize labor costs in order to compete most strongly on price, thus placing a ceiling on the amount they are willing to pay for labor (Gerhart & Rynes, 2003). Conversely, firms that seek to attract top talent may compete across industries, and this competition places a floor on the amount they must pay in order to attract the best employees (Gerhart & Milkovich, 1990). Both factors may influence pay decisions simultaneously. In addition to these pay level decisions, pay structure decisions can influence how employees are rewarded and the overall strategy the organization takes for promotion and retention of workers. An organization may choose a highly differentiated pay structure, in which lower-level employees are paid much less than higher-level employees (Dulebohn & Werling, 2007). This type of structure emphasizes promotions and growth, where employees strive to move up the hierarchy, with an emphasis on firm-specific-skills (Gerhart & Rynes, 2003; Shaw, Gupta, & Delery, 2002). Alternatively, an organization may choose a flatter, more egalitarian pay structure, which can emphasize cooperation and harmony among workers (Gerhart & Rynes, 2003).

Beyond the strategic decisions that an organization must make in setting up pay (how much to pay, in what way, and, as I will later argue, how often), it is worth mentioning the fundamental reasons that employers compensate employees at all. The term “compensate” means to “make an appropriate and usually counterbalancing payment to” (Merriam-Webster, 2017). Employers offer employees a counterbalancing payment of money in exchange for their time and effort in the form of work, with compensation “at the core” of the exchange relationship between employee and employer (Bloom & Milkovich, 1996, p. 23). Employee compensation represents an entire domain

of employment law as organizations must follow important statutes about how much and how often to compensate employees (US Department of Labor, n. d.). Additionally, and importantly, money is instrumental to life. Money is necessary to procure basic needs, such as food and shelter, and also acts as an indicator of status, success, and societal worth (Gupta & Shaw, 1998). It can be assumed that due to this fundamental instrumentality, and the ease with which money can be quantified on a known scale, people “always prefer more money to less” (Gerhart & Rynes, 2003, p. 48-49). Thus, although employees may be motivated to seek paid employment for many reasons, money is usually a primary driver. Further, an assumption underpinning the aforementioned complex pay decisions made by organizations is that money motivates behavior. Thus, organizations may attempt (with various degrees of intentionality and strategy) to motivate specific behaviors by utilizing variable pay-plans or performance-contingent pay, and use money as a key means to attract and retain employees (Gerhart & Rynes, 2003; Gupta & Shaw, 1998; Mitchell & Mickel, 1999).

The motivational components of pay have been examined and debated by scholars for some time, with two dominant (and divergent) schools of thought (Gerhart & Rynes, 2003). One perspective maintains that money acts as a poor motivator, and underpins this assertion with a few key theories. Herzberg’s (1959) two-factor theory of motivation states that job satisfaction and job dissatisfaction arise from two disparate sources (motivation factors and hygiene factors). In this theory, Herzberg suggested that money acts a hygiene factor, meaning that it can alleviate dissatisfaction, but money would not contribute to developing satisfaction. Deci and Ryan’s (1987; 2000) cognitive evaluation theory (CET), and the related self-determination theory (SDT), similarly place rewards

(such as pay) as controlling to the individual, meaning that they may stifle motivation when they are perceived as externally regulating behavior rather than enabling the individual to dictate their behavior themselves. According to this paradigm, rewards dictate how, and when something must be done, and this external control serves to reduce intrinsic motivation. Thus, in application to compensation, pay for performance should theoretically erode intrinsic motivation, except in the specific cases in which pay gives cues to indicate self-competence when an individual is able to complete tasks with discretion (Gerhart & Rynes, 2003). On the whole, though, the notion persists (and is in fact, growing increasingly popular) that financial incentives are detrimental to intrinsic motivation and potential performance (Shaw & Gupta, 2015).

However, as noted by Shaw and Gupta (2015), despite what is a continued proliferation of these opinions both by scholars and influential figures in the popular press, the scientific evidence largely supports the opposite conclusion regarding the relationship between pay and motivation. Examination of the empirical literature on the topic indicates that pay does not destroy motivation, pay-for-performance plans are often effective, and put simply, incentives are important and strong drivers of behaviors and performance (Cerasoli, Nicklin, & Ford, 2014; Fang & Gerhart, 2012; Gerhart & Rynes, 2003; Gupta & Shaw, 1998; Gupta & Shaw, 2014; Shaw & Gupta, 2015). This is not to say that incentives of all types are unilaterally effective. As mentioned above, pay decisions in organizations are complex. However, the evidence is abundantly clear that financial incentives *are* motivational and can be considerably effective, particularly when designed and utilized appropriately (Gupta & Shaw, 2014).

Given this, then, it is important to highlight and summarize a few critical aspects of compensation and financial incentives on the whole. First, although there exists a breadth of research on compensation and pay decisions, the complex nature of these decisions leave much still understudied. Further, compensation, pay, and income, are all terms used within these broad literatures (and indeed, in this dissertation) somewhat interchangeably to refer to the exchange of money from employer to employee to remunerate for an employee's time and effort (and, depending on the type of incentive, performance) on the job. This money is generally critical to employees' lives and families and is a primary reason for which individuals seek employment (Bloom & Milkovich, 1996). Third, notwithstanding theories to the contrary, scientific evidence supports that pay is an effective driver of behaviors and performance for employees in organizations. Despite this knowledge, though, much less is known about how paydays in themselves affect behaviors in the workplace. Because the evidence suggests that pay is so important for driving employee behaviors, it is unfortunate that no research has examined this on a more micro-level to explore how the timing of pay might similarly influence behaviors at work. Below, I summarize the existing literature on temporal landmarks and payday timing to illustrate how timing considerations should be considered in this important but overlooked phenomenon.

### **2.3 Temporal Landmarks and Payday Timing**

The idea that individuals seek to provide structure around their personal and work lives by using temporal cues is not a new one by any means. In fact, even in the daily rhythms of medieval Benedictine monks, the use of temporal landmarks is evident. These monks established daily rhythms, with particular hours fixed to certain celebration of

“Divine Offices,” signaled with bells, and these eight canonical hours served as “‘landmarks’ punctuating the daily cycle of the monastery” (Zerubavel, 1981, p. 35). Peetz and Wilson (2013) liken the use of temporal cues to that of a person seeking to get oriented in a new city – looking for prominent objects (landmarks) in order to understand directionality and make sense of spatial differences. In our lives, we similarly may use chronological indicators to help us segment and make sense of our days, weeks, and years as we experience the present and plan for the future. These indicators have been frequently referred to as temporal landmarks (or locations)– events or periods of time that provide structure to one’s experience of the world and stand as contrast to an otherwise monotonous experience of one’s days (Peetz & Wilson, 2013). Examples of such landmarks can be events, such as a birthdays, the birth of a child, performance reviews, or job changes (Dai, Milkman, & Riis, 2014; Peetz & Wilson, 2014), rhythms of the calendar or season, such as the weekend, the first of the month, the start of the academic semester, or New Year’s Day (e.g., Dai et al., 2014), or other personally salient cues that an individual might utilize to structure their time. These landmarks may be significant and occurring only once (e.g., a 40<sup>th</sup> birthday), but often they may be more mundane and routinely occurring, like a Monday, (Peetz & Wilson 2013), lending credence to the idea that paydays may function as a salient temporal landmark for employees. Recurrent temporal landmarks and regular rhythms, such as days of the week, or firsts of the months, serve to add predictability and order and enrich cognitive well-being (Zerubavel, 1981).

Additionally, temporal landmarks help to explain how and why we may experience time non-linearly. For example, a temporal landmark (e.g., an upcoming 40<sup>th</sup>

birthday) may demarcate one's time, whereby we conceptualize our thoughts and identities according to the before- and after-birthday self. An explanation of this is that individuals segregate their time into mental "accounts", and these landmarks may serve to separate the accounts (Rajagopal & Rha, 2009; Dai et al., 2014). The mental accounting aspect of temporal landmarks has been shown to influence how individuals make and set goals according to these before and after points (e.g., I will go skydiving before my 40<sup>th</sup> birthday; after the New Year's holiday I will focus on physical fitness, etc). And yet, much remains unknown about the way these landmarks influence individual thoughts and behaviors in the workplace.

Work on the "fresh start effect" (Dai et al., 2014; 2015) has established that individuals are more likely experience increased motivation and initiate goals on specific "fresh start" temporal landmarks, such as Mondays, the first of the month, or other days that signal new beginnings. This work illustrates that even otherwise mundane events (the beginning of the week, or the change of the calendar), meaningfully stand out and alter individual behaviors, particularly in terms of driving individuals toward behaviors that facilitate personal goals, such as diet or exercise. Further, time has been shown to be not fungible; we view our time in and outside the work context differently (Rajagopal & Rha, 2009). This idea suggests that perhaps temporal landmarks may be similarly divided across domains. Although this work on goals by Dai and colleagues represents an important building block on temporal landmarks and the workplace, the literature to this point has been underdeveloped on temporal landmarks specifically within the organizational context. Organizationally-relevant landmarks are often conceptualized as large scale events, such as a job change or promotion, or perhaps important calendar

days, such as the beginning of the fiscal year, or start of the quarter. Yet, building on this research that simply days of the week can act important landmarks, I postulate that employee experience a micro, yet certainly significant, temporal landmark frequently in their working lives: the event of payday.

The majority of paydays in the United States fall primarily on one of two temporal rhythms: biweekly (i.e., every 2 weeks; 36.5%), and weekly (32.4%; Burgess, 2014). Thus, over two thirds of the working population in the US are experiencing payday on a predictable, and relatively frequent, rhythm that coincides with the days of the week, with the remaining paying on semi-monthly or monthly cycles that follow the days of the calendar. These decisions are somewhat related to company size, as larger companies tend to structure their paydays biweekly, with over 70% of companies that employ more than 1,000 employees paying on a biweekly schedule, and smaller businesses having the most flexibility in structuring their pay decisions, with a mix of weekly, biweekly, monthly, and semi-monthly (Burgess, 2014). This rhythm, the cycle by which individuals not only receive payment, but workers eagerly anticipate (Burgess, 2014) and structure many of their personal decisions and purchases (Jacobe & Jones, 2009), is critical. Waiting and anticipating the payday may divide employees into their “before pay” and “after pay” selves. Based on this anticipation for payday to come, it is likely that employees may think or behave differently after the arrival of the awaited day.

Despite this, the organizational literature to date has not accounted for this temporality in our understanding of how pay influences in employees. How to pay people (hourly, salary, piece-meal, etc) represents an important and consequential decision that employers make as they attempt to align their interests with those of their employees

(DeVoe & Pfeffer, 2007a; 2009). Inherent in this, how, of course, is also when – with the option to pay at various frequencies, organizations will, with these pay decisions, establish these temporal rhythms and cycles that can guide employee behavior both in and outside of the organization. As noted by Zerubavel (1981), in non-Western societies, human activity itself dictates the calendar, but in Western societies, the reverse is true: the calendar dictates human activity. It is evident that the rhythms of pay dictate the way society operates. In fact, these temporal structure have led to the development of an entire industry (i.e., payday loans, check-cashers) that operates strictly in lock-step with these rhythms. Compared to the level (i.e., magnitude), or structure (i.e., salary, hourly, etc) of pay, there is a void in the theoretical underpinnings of the timing of pay (Parsons & Van Wesep, 2013), in addition to the larger scarcity of theorizing on salary as a stable aspect of work in organizational research (Leana & Meuris, 2015).

Importantly, though perhaps not surprisingly, paydays represent the day that an employee receives their income for work. As mentioned above, organizations tend to adopt a stable pay cycle, whereby employee payroll is distributed on a regular and expected basis (e.g., weekly and biweekly; Burgess, 2014). The frequency of these cyclical distribution of payments can vary according to a worker's industry, role, or even state of employment, as many states have regulations dictating that pay frequency for specific situations (US Department of Labor, 2017). From an organizational standpoint, payroll decisions and the frequency of pay are important and consequential for the human resources and finance departments – generating payroll can represent a significant time and cost investment for companies. Each payday can require processing time for HR professionals to determine appropriate pay amounts, including paycheck deviations based

on overtime, commissions, or other variable-pay factors, in addition to potential service fees or banking issues that must be addressed each time payroll is run. For this reason, some organizations may seek to minimize pay frequency, so as to minimize these burdens on company time and personnel.

On the other side of the payroll equation is the employee. For most employees, receiving an income is likely a primary reason, if not the sole reason, for which they engage in paid work (Bloom & Milkovich, 1996). Indeed, even as many “live to work”, most individuals also “work to live” so as to provide an acceptable lifestyle for themselves and their families, whereby income is an essential part of individual’s life (Leana & Meuris, 2015, p. 56). This day serves as a salient reminder of the income we receive in exchange for daily inputs at work, and the nature of our exchange relationship with our employer in which we give our time in exchange for pay. As such, I propose that the payday represents a significant day for employees that may, in accordance with the definition of temporal landmarks, “stand out in the everyday humdrum of life,” (Peetz & Wilson, 2013, p. 250). In their recent call for more research in employee compensation, Gupta and Shaw (2014) note that pay influences employee behaviors “in virtually every aspect of organizational functioning” (p. 1). It stands to reason, then, that the *timing* of compensation should likely have important influences on employees as well, and payday may well act as a prime that activates money-affected methods of cognition and behavior. Work on hourly pay provides tangential support to this idea. A growing body of work by DeVoe and Pfeffer has shown that activating awareness of method of payment (e.g., hourly pay vs. salary pay) can change the way people view time in accordance with money, and meaningfully change behaviors such as choosing to volunteer (e.g., DeVoe &

Pfeffer, 2007a; 2007b; 2009). Further, payday is an event that is standardized onto a specific temporal location in the life of the employee (e.g., biweekly, monthly, etc). The co-occurrence of events and temporal location in such a fashion leads to a “perceived inseparability” – the timing cannot be untangled from the event in itself, and individuals view these temporal recurrences as natural and structuring to everyday life (Zerubavel, 1981, p. 42). In sum, I argue that payday serves as an important temporal landmark that meaningfully stands out to employees in organizations.

#### **2.4 The Psychological Effects of Payday**

As a culture, we recognize and celebrate payday and have for quite some time. In 1932, payday served as a salient enough event for the employees at Hollywood Candy Company to influence product decisions, as it happened to be payday when they were searching for a name for a new candy, leading to the creation of the “PayDay” candy bar (Old Time Candy Company, n.d.). Additionally, beyond eagerly awaiting payday, individuals also structure important decisions and actions around payday. A recent Congressional testimony by the Community Financial Services Association of America indicates that three-quarters of Americans are living paycheck-to-paycheck (Hearings before the House Financial Services Subcommittee on Financial Institutions and Consumer Credit, 2016). This staggering statistic indicates just how important these rhythms are for many Americans. If employees could not predict their paydays and the temporal regularity of these recurrent events, it would be difficult to plan for one’s important expenses and budget accordingly (Zerubavel, 1981), giving these recurrent days particular significance to most employees.

To this end, the effects of paydays and income receipt have been explored outside of the organizational literature in greater social science research on economics and household spending. This research has focused on how consumption varies irrationally in accordance with paydays; work supports that individuals are affected beyond the pure economics of receiving a paycheck and have been perhaps since the beginning of paychecks. Even very early work found liquor consumption to spike in accordance with paydays (Osborn, 1898; Stephens, 2006). Much more recent work on pay cycles has found that pay cycle length affected how individuals consider opportunity costs (Spiller, 2011). In this research, the length of the pay cycle influenced the way individuals made consumer purchasing decisions and examined the tradeoffs between alternatives (i.e., opportunity costs). Individuals with short pay cycles were more likely to consider opportunity costs of purchases than those with long pay cycles due to a feeling of resource constraint (Spiller, 2011; 2012). Further, individual consumption within households is similarly “excessively sensitive” to the receipt of a paycheck, beyond what would be rationally expected according to economic theory (Stephens, 2006, p. 696). While rational expectations would suggest smooth consumption over time, even anticipated increases in disposable income (such as a tax refund or paycheck receipt) have been shown to drive immediate increases in consumption (Dobkin & Puller, 2007).

Evidence further suggests that individuals who receive money in the form of food stamps experience a 10 to 15 percent decrease in their caloric intake over the course of a month, suggesting that pay timing affected consumption (Shapiro, 2005). Using multiple samples of individuals receiving payments in a variety of methods, such as Social Security, bonuses, dividends, and paychecks, Evans and Moore (2011) found that even

death was sensitive to paycheck receipt, with mortality operating similarly in a cyclical nature in accordance with income. There is a 22 percent increase in mortality immediately after check receipt in individuals receiving governmental Supplemental Security Income (SSI) payments, as well as increase in drug-related hospitalizations in the United States (Dobkin & Puller, 2007). These results are echoed in other countries as well, with Swedish workers similarly exhibit a paycheck-timed increase in mortality (Andersson et al., 2015). Finally, research has shown that payday receipt for harvest has effects on cognitive performance due to increased cognitive resources in a sample of farmers (Mani, Mullainatha, Shafir, & Zhao, 2013). Receipt of payment allows individuals to utilize cognitive resources otherwise occupied by thoughts of scarcity, leading to improved cognitive functioning in relatively poor individuals (Mani et al., 2013). Thus, although outside of the organizational literature, these payday effects are consistently evident across a variety of contexts as predictive of outcomes as vital as cognitive functioning and death.

Beyond these individual effects found in scientific research, organizations in practice have begun to take notice of the “payday effect”. Researchers in marketing have advocated for organizations to time their product marketing schedules to the sensitivity that consumers have shown to exhibit in conjunction with pay cycles. Consumers are more likely to alter their regulatory focus to prefer promotion-focused products close to payday and prevention-focused products when payday is far in the future (Mishra, Mishra, & Nayakankuppam, 2010). Relatedly, daily tracking data from Gallup (Jacobe & Jones, 2009) indicates that consumer spending significantly increases during the first and midpoints of the month, indicating a payday effect in purchasing that coincides with

popular pay cycle intervals. Further, many organizations implicitly understand these swings in consumption to some degree, although much of the consideration is structurally ingrained. It is likely due to this that companies in the U.S. offer bonuses around Christmas (a holiday with high levels of associated consumption), a practice that is echoed (and in fact, mandated) across many countries in the world, with bonus payouts coinciding with holidays, standard vacation timelines, or other culturally important dates (Parsons & Van Wesep, 2013). A rational view would indicate that the timing of pay does not matter, and yet organizations are already accounting for temporal variations in consumption and spending by structuring pay in such a manner (Parsons & Van Wesep, 2013).

The hypothesized mechanisms by which these aforementioned payday effects occur varied across studies and contexts, yet the conclusions were remarkably similar. Individuals are undoubtedly influenced by paydays in their lives beyond just the physical influx of cash to the point of altering individual cognitive processes and reasoning. Further, to some extent organizations recognize this, although much more from a consumer consumption perspective (i.e., consumer purchasing decisions and organizational marketing decisions); the timing effects on workers has been largely overlooked.

## **2.5 The Psychology of Money**

In considering paydays, it is critical to note that paydays are at their core a transaction and monetary cue. Simply put, on a payday an employee receives money from their employer in exchange for their work during that pay period, be it a week, two weeks, or month. Because of this exchange of money, employees are likely cued to think

about money more than they may on days in which they are not receiving payment. This is important because of the burgeoning body of work on money priming theory that has found that even unconscious, seemingly innocuous associations with money can significantly alter individual behavior. In her review of the literature on money priming, Vohs (2015) highlights several important findings on the impact of money on individuals, such that even just subtle reminders of money (i.e., not even necessarily receiving or handling cash) can influence motivation, attitudes, and behaviors. In this stream of research, the term money generally refers to simply the “idea of money,” and experimenters generally prime these effects by increasing the extent to which concepts of money are accessible for participants, but still below their conscious awareness (Vohs et al., 2006, p.1154). For example, individuals who are reminded of money are more likely to behave agentically, forgo offers of help, and put in more time and effort towards tasks (Gasiorowska, Chaplin, Zaleskiewicz, Wygrab, & Vohs, 2016; Mogilner, 2010). From an interpersonal perspective, money cues can cause individuals to be unhelpful and stingy, and display less compassion or generosity towards others (Vohs, 2015). Money has been shown to decrease sociality, with those primed with money more likely to choose time alone compared to with others, and has also been shown to increase persistence, with those primed with money more likely to persist on tasks (Vohs et al., 2006). In their study of the evaluations that individuals make about the tradeoffs between their time and money, DeVoe and Pfeffer (2009) found that those primed to think of their pay in economic terms (i.e., hourly pay as a tradeoff of hours worked for compensation) were less likely to volunteer their time to help others. Even subtle exposure to money may also

influence a sense of morality and promote unethical intentions and behaviors in individuals (Kouchaki, Smith-Crowe, Brief, & Sousa, 2013; Gino & Mogilner, 2014).

The interesting findings in this stream of research lead to a few natural questions about the role of money in the workplace. First, a large majority of these studies examining these money priming cues have occurred with students in a laboratory setting, with over 165 studies across 18 countries using money priming experiments as of 2015 (Vohs, 2015). Despite this proliferation of studies, little is known about how money cues might function with employees in an organizational setting. Yet, this is exactly the setting in which most individuals actually receive their incomes. Further, money primes have largely been conceptualized as visual or linguistic cues that induce awareness and accessibility of the concept of money, such as images of currency in a laboratory experiment or word scrambles that mention financial terms, such as “salary”, “wealthy” (e.g., Vohs et al., 2006; Pfeffer & DeVoe, 2009). However, the temporal landmark of payday may further serve as a monetary cue that meaningfully influences individual thoughts and behaviors during the workday.

Literature has found that money priming effects, even due to just brief exposure to these verbal or visual cues in a laboratory environment, tend to be more robust and larger than so-called “classic” effects of priming in other psychological literatures (Vohs, 2015). Thus, examination of this phenomenon within the organizational context, where outcomes may meaningfully change productivity, performance, or interpersonal behaviors is of critical importance. Further, the temporal landmark of payday is one that organizations can control and change, thus underscoring the importance of understanding how these “payday effects” may manifest in the working environment. . Having reviewed

the research on compensation, timing effects, and the psychological effects of money, I now move to explore the single event (payday) in which these three themes are meaningfully coexistent.

## **CHAPTER 3**

### **HYPOTHESIS DEVELOPMENT**

#### **3.1 Effects of payday on workplace attitudes and motivations**

As I have argued above, only when considering the currently disparate literatures on compensation, temporal landmarks, and monetary cues in concert can we understand how paydays might have meaningful ramifications on the attitudes and behaviors of individuals in the workplace. Indeed, paydays act as a salient reminder of income on a recurrent basis. Like many events that occur in a standardized and routinized pattern, it is likely that individuals do not differentiate between the event itself (receipt of money) from the temporal location of the event (biweekly, monthly, etc). Instead, these are inseparable – the activity of the event is as much the temporal location of the event, as is man’s tendency to view such recurrent events (Zerubavel, 1981). In application of this, I argue that employee attitudes and behaviors are likely to be affected by paydays, and thus fluctuate meaningfully on days which they are paid as compared to non-paydays. Thus, I now move to discuss how payday influences specific cognitive, affective, and behavioral outcomes that should likely arise as a result of payday, beginning with the sense of personal control as a critical explanatory mechanism.

##### **3.1.1 Payday and Personal Control**

The logic for the predicted influences of payday on these important outcomes extends beyond an emotional response to receiving money. Rather, in line with the research on money priming, I argue that employees are more likely to feel a particular sense of personal control and agency on paydays, and their attitudes and behaviors both

in and out of the workplace will be affected in turn. This is in line with the symbolic nature of money – that money serves as more than just paper or numbers to individuals. Instead, money engenders feelings of power, autonomy, and control, which are feelings that humans fundamentally strive for in their lives (Mitchell & Mickel, 1999). Payday may act as a salient reminder of money with meaningful ramifications on feelings of personal control and self-sufficiency. Money, in general, serves as one of the most common and salient methods through which exchange occurs, and thus can prime a more market-focused, business-like mindset (Jiang et al., 2014; Kouchaki et al., 2013; Vohs et al., 2008, Vohs, 2015).

Research has shown that even seemingly minor reminders of money have caused participants to shift from a more communal mindset to an exchange view of interactions (Savani, Mead, Stillman, & Vohs, 2016), enacting a “market mode” of relationships with increased self-sufficiency and a focus on oneself (Gasiiorowska et al., 2016; Vohs, 2015). Consistent with this, subtle money primes lead individuals to feel more self-sufficient and independent, seeking to attain personal goals (Vohs et al., 2006) and behave agentically (Vohs, 2015). In exploring the relationship between money and physical pain, Zhou and colleagues theorized to this end, suggesting that money serves as an “all-purpose resource” (p.700) that instills its owner with a confidence and a sense of efficacy (Zhou et al., 2009). In consideration of the temporal landmark of payday, then, it is likely that similar effects will occur as employees are reminded of their paycheck when this important day arrives.

Beyond this, money may serve as a resource that enables a sense of personal control; money is in itself a tool instrumental to gaining additional resources or fulfilling

one's wants (Lea & Webley, 2006), and acting as an important means to manipulate the greater social system for one's own gain (Zhou et al., 2009). Here I define personal control in terms of ones' ability to exert mastery over their environment, consistent with the idea that the ability to control one's externalities through personal discretion is an important factor in psychological well-being (Ryff, 1989). According to Ryff (1989), a person who is high in this characteristic feels that they can manage everyday affairs with competence and has a strong sense of control over the world around them. This conceptualization of personal control as a management of externalities (i.e., a sense of discretion and mastery over the affairs of one's life) distinguishes personal control from other related constructs, such as self-control or self-regulation. Specifically, these constructs deal with an individuals' control over internal thoughts, motivations, and behaviors (Bandura, 1991). That is, self-control and self-regulation consists of management of one's internal states and behaviors, whereas personal control consists of feelings that one can manage and exert mastery over their external environment and the factors that affect them in their lives (Ryff, 1989; Judge & Hurst, 2007)

More generally, individuals in poverty or financial strain are less likely to feel such personal control over outcomes (Price, Choi, & Vinokur, 2002; Bernheim, Ray, & Yeltekin, 2013). Perceived personal control is often considered as an extent of mastery; that is, a feeling that one can exert command over the forces of their life (Wanberg & Banas, 2000). Humans have a fundamental need for autonomy and control over outcomes (Deci & Ryan, 1985); receiving money provides a change in one's psychological sense of control in that it reduces dependency on social influence, and serves to fulfill the "autonomy instinct" (DeWitte, 2006). Vohs (2015) suggests that money shifts focus to a

sense of self-sufficiency as it strengthens a “belief that one can make it on one’s own” (p. e87), and in a larger sense is associated with feelings of control and autonomy (Mitchell & Mickel, 1999). Finally, speaking to the role that money in particular may have in psychologically influencing a sense of control, research has also suggested that socioeconomic status (in terms of income, as well as prestige and education) can influence a sense of personal control in individuals (Christie & Barling, 2009). Taken together, these findings suggest that payday’s role as a temporal landmark may engender these feelings of control given the consistent societal influence that money has on control and autonomy in one’s life.

Importantly, it is not just that money (or in this case, receipt of money in the form of payday) actually provides resources to increase personal control whereby money acts merely as a tool that enables for the exchange of goods and resources (“Tool Theory”; Lea & Webley, 2006). Indeed, the counter to “Tool Theory” is “Drug Theory,” in that the psychological effects of money are drug-like in nature: that money operates as a “functionless motivator”, driving behaviors beyond just its ability to act as a tool for gaining further resources (Furnham, 2014; Lea & Webley, 2006). This is consistent with the duality of money as both instrumental and symbolic (Shaw & Gupta, 1998). Money serves not only as a means to obtain necessary resources (e.g., a tool), but serves as a greater symbol of status and one’s value to society (Mitchell & Mickel, 1999; Shaw & Gupta, 1998). Although the economic benefits of money as a tool are myriad, I argue that this is not the mechanism driving an increase in a sense of personal control. Research suggests that money cues prime a more market-mode mindset, psychologically influencing behaviors, even when actual currency is not provided to actually increase

agency or purchasing power, and this effect holds even in children who are not necessarily aware of the economic meaning of money (Gasiorowska et al., 2016). Tangential to this, work in marketing has examined the effects of pay receipt on consumer regulatory focus and found that individuals had meaningful changes in regulatory focus based on whether payday was temporally close or distant. Importantly, these researchers found that these effects could not be explained by the increase in liquidity that occurs in conjunction with payday (Mishra et al., 2010). Instead, these effects are psychological changes and further support the idea that payday causes meaningful differences in cognitive processes.

In consideration of how the reminder of money that is payday may influence individual attitudes at work, it is key to consider how money is perceived by individuals in general. Money has a symbolic role in society that confers feelings of power, with even money primes having been shown to confer feelings of strength to individuals (Furnham, 2014; Vohs, 2015). Further, researchers studying money attitudes have suggested a multidimensional construct, with multiple scales considering a factor of security, such that money engenders feelings of security and an ability to take care of oneself and handle externalities (Rose & Orr, 2007; Furnham, Wilson, & Telford, 2012). Others have also named a factor of power, whereby money acts a source of autonomy for individuals (Furnham et al., 2012; Furnham, 2014; Lim & Teo, 2007). Money's symbolic attributes of conferring power, autonomy, security, and freedom (Mitchell & Mickel, 1996; Rose & Orr, 2007) are likely most salient on those days when one actually receives it, enabling a sense of personal control to the receiver. Taken together, then, I argue that

employees experience an increase in their sense of personal control on days that they are paid because of these psychological factors inherent in the temporal rhythms of payday.

*Hypothesis 1: Individuals are more likely to feel a sense of personal control on payday than non-payday.*

### **3.1.2 Payday and Self-efficacy**

Self-efficacy, which is one's belief in an ability to achieve given attainments (Bandura, 1997; Bandura, 2006), is a key component of the social cognitive mechanisms by which individuals respond to and exert control over the events in their environment, strive for goals and motivate their behaviors, and make sense of their experiences (Bandura, 2000). Further, self-efficacy can be a domain-specific, rather than global, belief about one's capabilities. For example, an athlete may feel highly efficacious on the sports field, but lack this sense of efficacy when it comes to her cooking skills in the kitchen. In the context of work, then, I specifically explore the construct of self-efficacy in this domain, rather than a global sense of self-efficacy. This domain specific self-efficacy has been shown to have state-like properties, acting as a proximal state that predicts critical work outcomes such as job performance, and is subject to change over time (Heggestad & Kanfer, 2005; Judge, Jackson, Shaw, Scott, & Rich, 2007). In addition to acting as an important predictor of performance, self-efficacy can further be predicted by performance as the two operate in a bidirectional relationship (Heggestad & Kanfer, 2005); in this situation, experiences of successful performance strengthen an individual's belief in their own capabilities, while self-efficacy further enhances individual performance (Wood & Bandura, 1989).

In the context of paydays, I argue that pay should serve as a salient reminder of recognition for work completed. At its core, pay is a remuneration for completed work. Individuals receive their paycheck as compensation for their efforts at their specific work tasks, and therefore receipt of such likely reinforces beliefs in one's capabilities to do these work-related tasks. In this way, a paycheck acts as feedback for one's work, and likely serves to remind and reinforce feelings of self-efficacy. Existing research supports this, with Locke and Latham (1990) casting pay as a mechanism of feedback reflecting the achievement of goals (Mitchell & Mickel, 1999). Additionally, and importantly, work has shown that money primes increase the extent to which one feels self-sufficient and efficacious (Vohs, 2015). A body of work on the meaning of money has shown that money has important symbolic components, conferring signals of achievement and recognition, which are fundamental humanistic strivings (Mitchell & Mickel, 1999). Further, by offering bonuses, merit pay increases, or other types of financial incentives as rewards contingent upon a certain level of performance (Gerhart & Rynes, 2003) organizations have traditionally used money as a means of communicating feedback for satisfactory performance. Monetary transfers can serve as signals that provide feedback and information about one's performance (Suvorov & van de Ven, 2009). As such, employees may be comfortable with interpreting money in this way, as they may have a familiarity with money acting as a feedback mechanism in their relationship with their employer. Thus, integrating the findings from research on pay and the psychology of money together, the consistent finding that money symbolically signals achievement and recognition and generally engenders feelings of self-efficacy suggests meaningful impacts on individual efficacy beliefs in the work domain. One's paycheck should serve

as a reminder that one's work is worth paying for, and I suggest that the temporal landmark of payday will cause meaningful increases in job self-efficacy.

*Hypothesis 2: Individuals are more likely to experience job self-efficacy on paydays than non-paydays.*

The increased sense of personal control that individuals experience because of being paid should act as a key mechanism by which individuals experience greater job self-efficacy on payday. That is, this sense of control signals a capability to enact change on their environment, with individuals likely experiencing a greater sense in their beliefs about their capabilities as a result. One who feels a sense of control over their externalities may likely see these feelings spill over into a confidence in their abilities. Consistent with this, research has found that a sense of personal control increases the extent to which individuals take action to solve existing problems (Ross & Mirowsky, 1989). In this way, a sense of control spurs action and a likely belief in one's abilities to act inherent in action. Self-efficacy acts as a judgement of one's capabilities (Bandura, 1982). Because personal control should likely increase the extent to which individuals feel they have the capabilities to master their surroundings, it should likely spillover into a belief that they can master their work environment and have the capability to act within it. Building on these arguments, then, I propose that there is an overall increase in self-efficacy on paydays via the sense of personal control that arises because of this money-related temporal landmark.

*Hypothesis 3: The positive effects of paydays on job self-efficacy are due to an increased sense of personal control.*

### **3.1.3 Payday and Stress**

The idea that money is related to stress is certainly not a new one. In fact, in addition to work, money remains one of the most significant sources of stress for Americans year over year (American Psychological Association, 2016). In the context of payday, I propose that it is specifically the sense of personal control inherent in the receipt of money that may influence employee stress levels. Additionally, a sense of control has been linked to stress and finances on a grander, societal-level scale. Research has illustrated that experiences of wealth (as compared to poverty) during childhood can alter the extent to which individuals experience a sense of control during times of economic uncertainty, illustrating the fundamentally interwoven nature of these concepts (Mittal & Griskevicius, 2014). Similarly, scholars have found that poverty can have deleterious effects on cognitive functioning in individuals, with farmers having poorer cognitive performance before their harvest than after (when they received their pay), and similarly having significantly higher physiological indicators of stress (e.g., heart rate and blood pressure) before harvest than after (Mani et al., 2013). Additionally, money priming theory indicates that just the idea of thought of money can provide key buffering effects against other adverse outcomes. Specifically, participants who counted money or were primed to think about money had lower distress and pain than those not similarly primed, and money could similarly buffer experiences of ego depletion and existential anxiety (Boucher & Kofos, 2012; Zaleskiewicz, Gasioworksa, Kesebir, Luszczynska, & Pyszczynski, 2013; Zhou, Vohs, & Baumeister, 2009). These results provide tangential support to the potentially buffering effects of the idea of money when individuals experience money primes.

Despite this important work about the effects of scarcity and longer-term experiences of poverty on stress, and the promising effects in the money priming literature on the buffering effects of money, it remains unknown about how the payday phenomenon behaves at a much more micro-level, where employees are receiving paychecks weekly, biweekly, or monthly. From a simplistic perspective, it is likely that payday's arrival should reduce feelings of stress. With such a large portion of Americans living paycheck to paycheck (Gibson, 2016), the arrival of payday (and, thus, the paycheck), should provide at least temporary relief from financial stresses and constraints. Beyond this, though, I argue that another mechanism is at work here as individuals feel a sense of personal control and thus a subsequent reduction in stress.

A sense of control's important influence on stress is evidenced in the literature on burnout and job stress. Particularly, research has shown that control in the work context specifically (i.e., job control) is a key resource, acts as a buffer to job demands that employees experience, and prevents employees from developing long-term strain and burnout symptoms (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Employee decision latitude to control how job demands are met matters greatly; those that can make these decisions themselves do not tend to experience anxiety or job strain (Bakker & Demerouti, 2007; Karaskek, 1979). In fact, the American Psychological Association specifically names a feeling of powerlessness as a "universal cause of job stress" (American Psychological Association; n.d.); those individuals who have little control over the events of their work are more likely to experience stress at work (Greenberger & Strasser, 1986). Work in developmental psychology has echoed this finding, such that a daily sense of personal control has been shown to counteract stress, indicating that a

sense of control over one's personal environment has important ramifications for how one reacts to the stressors in the environment (Diehl & Hay, 2010). In application to the role of money and stress, socioeconomic status (including measures of income) has been shown to influence a sense of personal control and subsequently affect trajectories of work stressors experienced by employees (Christie & Barling, 2009). Thus, taken together, this logic suggests that employees should feel reduced stress on paydays. Further, the sense of personal control that one feels on the day they get paid should have meaningful ramifications for employee stress levels.

*Hypothesis 4: Individuals are less likely to experience stress on paydays than non-paydays.*

Integrating the arguments above, I expect that the increased sense of personal control experienced by employees will serve as the mechanism by which paydays cause reduced stress in employees.

*Hypothesis 5: The negative effects of paydays on stress are due to an increased sense of personal control.*

### **3.2 Effects of paydays on discretionary work and nonwork behaviors**

In line with the extensive literature that reminders of money can have strong effects on individual behaviors, and income's similarly strong effects on one's overall life in general (Leana & Meuris, 2015), it is logical to suggest that the temporal landmark of paydays will have important effects on relevant behaviors within and outside of the workplace. As such, I will examine the role of payday on two specific behaviors: organizational citizenship behaviors and recovery experiences. I examine these behaviors as important discretionary behaviors within and outside of the context of work given that

both domains can be influenced by the receipt *of* money, but generally neither OCBs or recovery experiences are directly rewarded or facilitated *by* money, thus avoiding the potential for confounding influences of the liquidity inherent in payday. Considering the work-related discretionary behaviors of OCBs builds on a growing body of work that indicates that money has important effects on interpersonal relationships. Including recovery experiences uncovers how the feelings of control and cognitive resource gain that I propose are inherent to payday might influence important nonwork discretionary behaviors.

### **3.2.1 Payday and Organizational Citizenship Behaviors**

In a laboratory context, several researchers have found that considering money engenders a focus on self-sufficiency in thoughts and behaviors (Vohs et al., 2006). Particularly, individuals primed to think about money have been shown to behave more self-sufficiently and independently, eschew help from others, and similarly act socially insensitively towards other individuals (Vohs, et al., 2006). In a similar vein, merely priming an economic mindset in people has been shown to reduce compassion toward others (Molinsky, Grant, & Margolis, 2012). Surprisingly, these effects of reduced helping after reminders of money remained unchanged even in collectivistic societies where interpersonal helping is a natural facet to the culture as well as within the context of romantic relationships, where helping would be expected (Savani et al., 2016). Thus, these effects appear to be largely consistent across various situations.

In the workplace particularly, I apply these findings to make a prediction regarding the role of organizational citizenship behaviors (OCBs). OCBs are considered within the literature as those behaviors that “contribute indirectly to the organization

through the maintenance of the organization's social system" (LePine, Erez, & Johnson, 2002, p. 52). Specifically, these would be discretionary, other-focused behaviors, often considered as contextual performance within the workplace. That is, despite varying definitions and taxonomies within the literature, OCBs are generally conceptualized along major dimensions that include altruism and helping behaviors within the workplace, which can be directed at other individuals (OCB-I) or the organization as a whole (OCB-O; LePine et al., 2002; Organ, 1997; Williams & Anderson, 1991, Dalal, , Lam, Weiss, Welch, and Hulin, 2009).

Because of the timing of payday is inextricably linked with the event of payday (i.e., the receipt of money; Zerubavel, 1981), the robust effects that have been demonstrated in social psychology regarding even subtle money primes support several important conclusions in the organizational context. Specifically, helping behaviors directed at colleagues (OCB-Is) may be a casualty of the exchange and economic-focused mindset that research has shown arises as a result of money primes (Gasiorowska et al., 2016; Vohs et al., 2008). On paydays individuals may be more cognizant of their singular exchange relationship with their employer, and may thus be less likely to consider engaging in helping or exchange behaviors directed at other individuals. Further, money primes have been shown to reduce the extent to which people are willing to offer help to others in a wide variety of studies, in which the manner of help is varied, but the pattern of results is highly consistent. Subtle money cues reduce helpfulness to others in need, offers of help on tasks, monetary donations, and volunteering (Vohs et al., 2006; Pfeffer & DeVoe 2009; Vohs, 2015). Money cues also increase the extent to which individuals exhibit a preference for solitary work and leisure activities (rather than with others), and

even the extent to which one physically distances themselves from a new acquaintance (Vohs et al., 2006), suggesting a decrease in interpersonal helping behaviors on payday.

This is further supported by theorizing by Bergeron (2007) and empirical work by Bergeron, Shipp, Rosen, and Furst (2012) that indicates that there is a trade-off between performance and citizenship behaviors, such that time spent engaging in these helping behaviors may come at a cost to task performance. Thus, though perhaps a subtle cue, I argue that paydays act as a temporal landmark that provoke a focus on one's self and self-sufficiency, reducing intra-individual helping behaviors (OCB-I) within the workplace. Individuals recognize the cyclicity of paydays, and the exchange relationship in which they are directly trading their task performance for financial reward is salient and cued, thus driving a focus on task behaviors and reducing intra-individual helping behaviors. Therefore, I hypothesize:

*Hypothesis 6: Individuals are less likely to engage in OCB-Is on paydays than on non-paydays.*

In contrast to reduced helping behaviors towards coworkers, helping behaviors directed toward the larger organization (i.e., OCB-Os), should increase on paydays relative to non-paydays. As argued above, primes of money have been shown to activate an economic schema that drives self-sufficiency and an awareness of an exchange relationship (see Gasiorowska, et al., 2016; Kouchaki, et al., 2013; Vohs, 2015). In the context of employment, this heightened awareness of the exchange relationship should likely make the exchange partner (i.e., the organization), more salient, and drive behaviors that are recognized as beneficial within the exchange relationship. Within the employee-employer relationship, positive organizational support (POS), which reflects

the extent to which the employee perceives that their employer values them and their contributions to the organization (Eisenberger, Huntington, Hutchison, & Sowa, 1986) is positively related to the extent to which employees engage in OCB-Os (Masterson, Lewis, Goldman, & Taylor, 2000). Other work on OCBs has contextualized the behaviors within the psychological contract; that is, the set of obligations that an employee believes their organization will uphold in an exchange relationship (Rousseau, 1989). On paydays, as exchange relationships may be more salient (Vohs, 2015), and payday represents an action upholding the employer's obligations, employees may be more likely to similarly engage in contributions to the exchange relationship through the performance of OCB-Os (Robinson & Morrison, 1995). Finally, individuals are more likely to focus on the cost-benefit tradeoff of relationships when primed with money because of a primed market-mindset and therefore view relationships in terms of their instrumentality (Teng, Chen, Poon, Zhang, & Jiang, 2016). In this situation individuals may be more likely to perceive that the organization is an instrumental exchange partner providing an instrumental resource (paychecks) and thus perceive the benefits of helping the organization exceeds the costs. Simply put, the employee is more likely to go above and beyond for their organization, and thus more likely to engage in OCB-Os. Thus, I hypothesize:

*Hypothesis 7: Individuals are more likely to engage in OCB-Os on paydays than on non-paydays.*

It is likely that the hypothesized reduction in OCB-Is and increase in OCB-Os that occur on paydays are due in part to the increased sense of personal control that occurs as a result of payday. In research on children, Gasiorowska and colleagues (2016) found that simply handling money shifted individuals into a market-mode that increased agency and

self-interested behaviors, such as persistence towards and performance on a task, and taking rewards, and decreased communal behaviors, such as offering help. Further, illustrating that it is the money itself, not the purchasing power of the resources that are inherent in money that increases agency, these researchers did not find evidence that helpfulness was affected by handling higher or lower values of currency. Instead, these findings suggest that it is the presence of money and its psychological power on individual cognitions that produces these behaviors.

Inherent to the definition of OCB-Is is that they are citizenship behaviors directed interpersonally towards other colleagues (i.e., the “I” portion of the moniker). Theoretical explanations of why an employee might perform these behaviors toward another colleague have focused on the nature of social exchange and reciprocity between individuals. If an employee decides to help another colleague in such a way, he or she may likely believe that at some point, this help will be reciprocated in the future, particularly if there is a strong relationship or friendship between the two (Bowler & Brass, 2006). Because money primes increase a sense of personal self-sufficiency and agency, and make individuals less likely to ask for help from others (Vohs et al. 2006; Vohs, 2015), it is likely that an individual who feels this sense of personal control may be less concerned with “paying it forward” for the interest of future reciprocity. Supporting this, recent work has indicated that individuals are more likely to perform cost-benefit analysis in their interactions with others after thinking about money, and thus think more strategically about the benefits of their behaviors towards others (Teng et al., 2016). Because the “benefit” of OCB-Is may often be future reciprocity, the sense of personal control one feels on payday may lead to an assessment of costs exceeding benefits, and

thus lead to reduction of OCB-Is on paydays. This likely drives a reduction in these helping behaviors towards coworkers as employees may feel that they may not need such help returned in the future because of heightened personal control.

*Hypothesis 8: The negative effects of paydays on OCB-Is are due to an increased sense of personal control.*

In addition to its mediating effects on the relationship between paydays and OCB-Is, the increased sense of personal control that arises on paydays should similarly mediate the relationship between payday and OCB-Os. OCBs directed at the organization drive increased organizational effectiveness (Organ, 1988), and it is thought that organizations would fail should their employees not perform in these extra-role behaviors (Katz, 1964; Robinson & Morrison, 1995). Further, OCBs (and, specifically, OCB-Os) are built on the assumption of a contract between an employee and their organization, where employees engage in citizenship behaviors as a part of an exchange relationship with their employer (Hui, Lee, & Rosseau, 2004; Robinson & Morrison, 1995). Thus, the employee's psychological contract (i.e., their beliefs about their existing exchange agreement with their employer) is directed at the organization in particular, which to some extent anthropomorphizes the organization as the exchange partner (Robinson & Morrison, 1995). Given this, there are several reasons why increased personal control might lead to increased organizationally directed citizenship behaviors. Because OCB-Os are discretionary, and can be withheld, it is likely that a greater sense of personal control in the exchange relationship, which is likely salient on paydays, motivates individuals to act benevolently toward their exchange partner (i.e., the organization). Further, although studies have not directly explored the link between personal control and OCBs, work has

explored the role of autonomy (a manifestation of agency and personal control in the workplace) and indicated that OCBs may be indirectly predicted by autonomy-supportive climates and individual autonomy orientations (Liu & Fu, 2011), suggesting that a feeling of personal control may indeed influence whether individuals choose to engage in these extra-role behaviors. Further, because of the exchange salience outlined above, it is likely that this sense of control's influence on OCBs drive OCB-Os in particular, rather than OCB-Is. Thus, taken together, I argue that employees are more likely to engage in OCB-Os on paydays because of a heightened sense of personal control.

*Hypothesis 9: The positive effects of paydays on OCB-Os are due to an increased sense of personal control.*

### **3.2.2 Payday and Nonwork Leisure Behaviors**

Beyond these hypothesized effects of payday on extra-role behaviors within the work context, paydays should have important effects for behaviors in the nonwork context. Specifically, the extent to which employees take the time to engage in experiences that reduce stress and enhance recovery from the work day is likely affected by the sense of personal control and overall cognitive resource gain that is thought to occur on payday (Mani et al., 2013). Recovery experiences, which consist of experiences of leisure, relaxation, detachment from work, and mastery experiences, have been shown to have important relationships with resources, such that resources are positively related to individual recovery from work stress as individuals can invest these resources toward recovery (Bennett, Bakker, & Field, 2017; Sonnentag, 2001; Sonnentag & Fritz, 2007). Recovery is conceptualized as a process that individuals engage in outside of their working hours to reduce and remove the strains the workday

and restore resources (Mejiman & Mulder, 1998; Sonnentag & Zijlstra, 2006). Antecedents of recovery include work demands, as stressors can increase activation of the psychobiological systems that make it difficult for employees to detach after work, with higher demands simultaneously making recovery particularly more vital (Sonnentag & Fritz, 2015). Individual engagement in these recovery behaviors can be affected by the actions of important others, such as a boss or spouse (Hahn, Binnewies, & Haun, 2012; Park & Fritz, 2015). Recovery can facilitate a host of positive outcomes, such as engagement and enhanced well-being and reductions in burnout and fatigue (Bennett et al., 2017; Sianoja, Syrek, de Bloom, Korpela, & Kinnunen, 2017; Demerouti, Bakker, Geurts, & Taris, 2009).

Importantly, individuals must actively set aside time for leisure, and can work to create time for activities that support recovery from work demands (Newman, Tay, & Diener, 2014; Park & Fritz, 2015), thus supporting the idea that external forces beyond just the demands of the workday might influence the extent to which one engages in the recovery experience overall. On payday, an employee feels a greater sense of control as well as a greater ability to engage in recovery behaviors due to this sense of control, reduced and overall reduction of stress as compared to non-paydays, and a general sense of buoyancy in having received a paycheck that they may want to celebrate by engaging in leisurely and relaxing activities that facilitate recovery. Thus, I propose the following hypothesis:

*Hypothesis 10: Individuals are more likely to engage in recovery experiences on paydays than on non-paydays.*

Integrating the arguments above, I believe that an important mechanism by which paydays enhance personal recovery is through a sense of personal control. Recovery is an activity in which individuals exercise discretion (Sonnentag, Binnewies, & Mojza, 2010); one generally has at least some degree of choice as to whether they think about work after the workday has ended or relax and engage in leisure activities. Therefore, when empowered by feelings of personal control that come with payday, individuals should overall feel more able to choose to engage in these behaviors, as individuals can work to set aside specific time for leisure activities in their schedules (Park & Fritz, 2015). Work in aging adults supports this potential relationship. When individuals generally feel more in control, they are more likely to participate in leisure activities (Menec & Chipperfield, 1997). When individuals feel more in control of their lives and environment in general, they may be more likely to engage in recovery behaviors outside of the workday rather than continuing to feel constrained and tied to their work. Thus:

*Hypothesis 11: Individuals are more likely to engage in recovery experiences on paydays than on non-payday because of a heightened sense of personal control.*

## **CHAPTER 4**

### **METHODS AND RESULTS**

#### **4.1 Research Overview**

To test these hypotheses I utilized a multimethod approach with two distinct data sources: an archival source to provide initial support to my conclusions and examine whether payday functions as a temporal landmark between-person, as well as a field data collection in which I examined the payday phenomenon within-person to test specific hypotheses in working individuals. For the archival study (Study 1), I gathered data that captures a subset of study variables at the between-person level with to bolster conclusions and generalizability about the nature of payday as a temporal landmark. For the within-person data collection (Study 2) I utilized a longitudinal design measuring employed individuals who were paid at biweekly intervals for 6 weeks. In these weekly surveys, I captured within-individual variation in the hypothesized variables for three paydays and three non-paydays. These two studies were designed to provide complementary perspectives for understanding the payday phenomenon and provide both within- and between-person data. Together, these data establish whether payday indeed functions as a temporal landmark for people and whether employees experience individual variation in critical workplace outcomes that coincides with the arrival of their biweekly paycheck.

## 4.2 Study 1: Archival Data Study

### 4.2.1 Study Overview

To provide evidence that payday acts a temporal landmark that stands out in daily life, I conducted an archival data collection utilizing Google searches in Sweden. Sweden was chosen because, although employers may choose the date of the month in which they pay their employees, many employers choose the 25<sup>th</sup> of the month. For example, payday occurs on the 25<sup>th</sup> of the month for central government workers (Andersson, et al., 2015) and is the most common day for payday according to Unionen, one of Sweden's largest unions (Unionen). Because of these monthly cycles of pay, payday can be a significant event in Sweden. When payday coincides with a Friday (and thus immediately precedes the weekend), it has its own Swedish name (lönehelg) which refers to the weekend following payday. Other work has indicated that mortality spikes dramatically on payday in Sweden; individuals are 23% more likely to die on payday than other days in Sweden (Andersson et al., 2015). Finally, and importantly, the 25<sup>th</sup> of the month presents a date that is not confounded with the beginning of the month, a common payday in many countries, thus eliminating the potential influence of "fresh start" effects (Dai et al., 2014). Thus, this represents a sample well-suited to uncover the potential nature of payday as a temporal landmark for individuals, given its apparent importance in the overall society.

Google data was specifically chosen to follow existing work that has utilized Google search data in order to establish the existence of temporal landmarks (Dai et al., 2014). Recent work on the prevalence and power of Google data suggest that these data can provide an important insight into the inner cognitions of individuals (Stephens-

Davidowitz, 2017). Specifically, scholars have begun to recognize that Google data can provide a unique representation and indicator of the inner thoughts of individuals without some of the potential confounds such as social desirability bias or demand effects that may occur with survey data (Stephens-Davidowitz, 2017). Given this, I utilized Google searches to determine whether payday acts as a landmark among individuals by examining whether, on payday, individuals significantly altered their Google search behaviors.

#### **4.2.2 Data and Procedures**

Data was obtained via Google Trends Sweden (<https://trends.google.se>) on a number of search terms that were determined to be representative of the concepts being investigated in this dissertation. These specific terms are listed in Appendix A. Google Trends provides publicly available records of Google searches for specific terms and allows users to search for specific terms of interest, locations, and time periods. This data is available at a daily level in three-month intervals. These terms were downloaded individually, each captured for a 3 month period, with the location specified to Sweden (i.e., Sverige as it is specified in Swedish). I downloaded intervals from January 2015 until December 2017 in twelve three-month clusters (i.e., January 1 – March 31; April 1- June 30; July 1 – September 30, and October 1 – December 31). This resulted in a total  $N = 1096$  observations across the clusters, where each observation was a single day in this time interval and  $N=12$  clusters of data downloaded.

The output of these downloads of search terms is a numerical indicator of the search volume for any specific term, which is an index of relative popularity. This search data is scaled according to interest on a scale of 0 to 100 based on the topic's popularity

in comparison to other searches within that interval (Stephens-Davidowitz & Varian, 2015). In order to gather the frequency of these terms in Swedish, I translated these terms initially using Google translate. To verify these translations and follow a procedure of back-translation (Brislin, 1970), I then sent a list of these translated terms in Swedish to an independent bilingual Swedish speaker who had no knowledge of the original word in English. This individual back-translated these terms to English to confirm these translations.

#### **4.2.3 Variables and Coding**

The dependent variables in this study were continuous variables ranging from 0 to 100 for that provides an index of relative popularity for each of the included terms (Stephens-Davidowitz & Varian, 2015). Additionally, and following work by Dai et al. (2014), predictor and control variables were created through dummy codes. Specifically, payday was coded as 1/0, with the 25<sup>th</sup> of the month being coded as “1” and all other days being coded as “0”. In the event that the 25<sup>th</sup> fell on Saturday, Friday (the 24<sup>th</sup>) was coded “1”, for Sunday, Monday (the 26<sup>th</sup>) was coded as “1”. Additionally, I included a set of dummy-coded control variables. Given that the data were downloaded in twelve clusters, and I created a dummy code for cluster so as to account for potential nesting of the scaling of the data in any given clustered interval (Dai et al., 2014). I included eleven dummy coded variables for cluster (1/0). Inclusion of these dummy variables for cluster follows recommendations by Cohen, Cohen, West and Aiken (2003) for handling of clustered data when the data has a small number of clusters. Finally, I coded for major Swedish holidays in order to control for any variation that occurred as a result of a holiday, which could potentially coincide with payday. These holidays included New

Year's Eve, New Year's Day, Epiphany, Good Friday, Easter Sunday, Easter Monday, Ascension Day, Whit Sunday, May Day, Swedish National Day, Midsummer Eve, Midsummer Day, All Saint's Day, Christmas Eve, Christmas Day, and Boxing Day (Public Holidays Global, 2018).

#### **4.2.4 Analytic Procedure**

These data were analyzed in SPSS using OLS regression. To analyze my hypotheses and examine whether payday does indeed act as a temporal landmark, I ran an independent regression equation for each dependent variable. Specifically, I regressed each search term (e.g., Netflix, Smörgåsbord, Anxiety) on the predictor variable of payday. I also included the dummy coded variables representing holidays as well as the data cluster to control for the nested nature of the data.

#### **4.2.5 Results**

Means and standard deviations for these study variables are listed in Table 1. Because these variables are collected independently and indexed within each specific search, providing correlations of these variables would not be meaningful.

These regression analyses indicated a significant positive relationship between payday and the Swedish term for payday ( $B = 22.79$ ,  $s.e. = 3.23$ ,  $p = .00$ ) and a significant negative relationship between payday and searches for the Swedish term for anxiety ( $B = -7.86$ ,  $s.e. = 2.72$ ,  $p = .00$ ). These results provide some initial support for payday's role as a temporal landmark, as well as its influence on stress (i.e., Hypothesis 4). Additionally, the regression coefficient for payday was marginally significant and negative (i.e., in the opposite direction of prediction) for the terms of "diet" ( $B = -4.56$ ,  $s.e. = 2.60$ ,  $p = .08$ ) and negative and significant for the term "LCHF" ( $B = -7.74$ ,  $s.e. = 2.29$ ,  $p = .00$ ) both of

which were chosen to represent self-control. Finally, the regression coefficient for payday was significant in the opposite direction of prediction for the terms “antidepressants” ( $B = 9.66$ ,  $s.e. = 4.13$ ,  $p = .02$ ) and “Netflix” ( $B = -5.37$ ,  $s.e. = 2.26$ ,  $p = .02$ ). The full results of the regression analyses of payday as predictive of these specific search volumes are listed in Table 2.

**Robustness Checks.** In addition to the above regression analyses, I also ran the models above while also controlling for days of the week with six dummy-coded variables to account for any potential confounding day-of-the-week effects. These analyses did not meaningfully change payday’s relationship with any of the dependent variables except for the outcome of Netflix, where payday was not significant when days of the week were controlled for ( $B = -.09$ ,  $s.e. = 1.60$ ,  $p = .95$ ). I elected to exclude these dummy-coded control variables from the model in the interest of parsimony, but results for Netflix alone should be interpreted with caution because of these potential day-of-the-week effects. Additionally, I also ran robustness checks where all paydays (i.e., 25th of the month) that fell on the weekend were coded as occurring on the Friday preceding the weekend, rather than split between Friday and the Monday following the weekend. This coding scheme resulted in results that were identical in pattern and significance to those of the retained coding scheme with the exception of payday’s relationships with searches for meditation and volunteering which became marginally significant ( $B = -5.80$ ,  $s.e. = 3.23$ ,  $p = .07$ ;  $B = -7.40$ ,  $s.e. = 3.99$ ,  $p = .06$ , respectively) and searches for diet, which became significant ( $B = -5.43$ ,  $s.e. = 2.60$ ,  $p = .04$ ). I elected to retain the initial coding scheme given that it appears to be a more conservative test of the effects of payday.

In addition to testing alternative coding schemes and control variables, I also examined several Google searches that should theoretically be unrelated to payday and may be common in Sweden. Specifically, I examined the Swedish term for weather (i.e., väder), as well as the Swedish phrase for the Swedish royal family (i.e., Svenska kungafamiljen) using the same control variables of cluster and holiday to determine whether payday significantly predicted these terms. The search volumes for these terms were not significantly predicted by payday ( $B = -1.66, p = .50$ ;  $B = 5.08, p = .18$  for weather and Swedish royal family, respectively). Thus, these results of common Google search terms provide some support that paydays do not in general bolster all Google search volumes and the results from Study 1 are not simply spurious.

**TABLE 1****Means and Standard Deviations of Study 1 Variables**

Variable	<i>M</i>	Std. Deviation
Lönedag ( <i>Payday</i> )	5.18	19.45
Ångest ( <i>Anxiety</i> )	57.18	16.61
Meditation ( <i>Meditation</i> )	44.00	21.01
Antidepressiva läkemedel ( <i>Antidepressants</i> )	16.02	24.44
Självhjälp ( <i>Self-help</i> )	14.17	23.26
Six Sigma ( <i>Six Sigma</i> )	13.72	23.28
Diet ( <i>Diet</i> )	54.85	16.66
LCHF ( <i>Low Carb, High Fat</i> )	63.34	14.34
Mysa ( <i>Chilling out</i> )	16.46	24.92
Netflix ( <i>Netflix</i> )	58.94	15.92
Smörgåsbord ( <i>Swedish Buffet Meal</i> )	16.75	25.06
Roliga aktiviteter ( <i>Fun activities</i> )	18.35	25.90
Vandringsleder ( <i>Hiking Trails</i> )	26.56	21.84
Volontärarbete ( <i>Volunteer work</i> )	24.36	23.88

Note. *N*=1096.

Values represent mean number of Google Searches that have been scaled to a value between 0-100 to represent relative frequency. (See Stephens-Davidowitz & Varian, 2015).

**TABLE 2**

**Regression Analyses Predicting Study 1 Variables**

Variable	Dependent Variable						
	Lönedag (Payday)	Ångest (Anxiety)	Meditation (Meditation)	Antidepressiva läkemedel (Antidepressants)	Självhjälp (Self-help)	Six Sigma (Six Sigma)	LCHF (Low Carb, High Fat)
Constant	2.78 (1.98)	54.77 (1.67)***	50.49 (1.99)***	21.35 (2.54)***	18.48 (4.42)***	9.58 (2.42)***	57.63 (1.41)***
Payday	22.79 (3.23)***	-7.86 (2.72)**	-3.19 (3.23)	9.66 (4.13)*	-4.32 (3.93)	4.64 (3.93)	-7.74 (2.29)***
Holiday	-.5.49 (2.85) <sup>†</sup>	-3.84 (2.40)	-2.65 (2.85)	-2.94 (3.65)	-5.57 (3.47)	-9.71 (3.47)**	-.63 (2.02)
Cluster - Dummy 1	-.22 (2.81)	1.22 (2.37)	-11.26 (2.82)***	1.47 (3.60)	-.62 (3.43)	8.22 (3.43)*	6.47 (2.00)***
Cluster - Dummy 2	.77 (2.81)	2.85 (2.37)	-12.98 (2.81)***	-10.36 (3.60)	-7.10 (3.42)	2.24 (3.42)	8.13 (1.99)***
Cluster - Dummy 3	2.08 (2.80)	-3.49 (2.36)	3.23 (2.80)	-7.81 (3.58)	-6.93 (3.41)*	5.91 (3.41) <sup>†</sup>	12.54 (2.00)***
Cluster - Dummy 4	3.63 (2.80)	-.02 (2.36)	-3.14 (2.80)	-5.77 (3.58)	-4.77 (3.41)	.40 (3.40)	-4.50 (1.99)*
Cluster - Dummy 5	3.66 (2.80)	2.60 (2.36)	1.51 (2.81)	-5.41 (3.59)	1.87 (3.42)	8.59 (3.41)*	13.18 (1.99)***
Cluster - Dummy 6	-.91 (2.80)	-.41 (2.36)	-31.80 (2.81)***	-3.14 (3.59)	-.15 (3.42)	6.69 (3.41)*	2.36 (1.99)
Cluster - Dummy 7	.66 (2.80)	11.86 (2.36)***	-4.57 (2.80)	-4.30 (3.58)	-10.08 (3.41)**	5.17 (3.41)	2.29 (1.99)
Cluster - Dummy 8	7.95 (2.80)**	9.14 (2.36)***	-3.98 (2.80)	-8.41 (3.58)*	-6.92 (3.41)*	1.00 (3.40)	8.62 (1.99)***
Cluster - Dummy 9	2.67 (2.81)	9.20 (2.37)***	-.51 (2.82)	-5.16 (3.60)	5.66 (3.43) <sup>†</sup>	9.22 (3.43)**	7.54 (2.00)***
Cluster - Dummy 10	3.70 (2.81)	.91 (2.37)	-9.98 (2.81)***	-10.02 (3.59)**	-2.92 (3.42)	3.99 (3.42)	6.09 (1.99)**
Cluster - Dummy 11	-1.36 (2.81)	.28 (2.36)	-1.39 (2.80)	-7.20 (3.58)*	-3.64 (3.41)	1.77 (3.41)	9.26 (1.99)***
R <sup>2</sup>	0.06	0.08	0.19	0.03	0.03	0.03	0.13

(Table 2 continues on next page)

Table 2 (continued).

Variable	Dependent Variable						
	Diet (Diet)	Mysa (Chilling out)	Vandringsleder (Hiking trails)	Netflix (Netflix)	Roliga aktiviteter (Fun activities)	Smörgåsbord (Swedish buffet meal)	Volontärarbete (Volunteer work)
Constant	54.58 (1.60)***	24.11 (2.58)***	16.77 (2.18)***	61.58 (1.39)***	20.27 (2.69)***	20.28 (2.58)***	26.27 (2.46)***
Payday	-4.56 (2.60) <sup>†</sup>	-1.97 (4.19)	-.79 (3.54)	-5.37 (2.26)*	1.06 (4.37)	.14 (4.19)	-5.37 (4.00)
Holiday	.74 (2.30)	1.04 (3.70)	16.17 (3.13)	20.87 (2.00)***	.43 (3.86)	-3.14 (3.70)	2.10 (3.53)
Cluster - Dummy 1	-.89 (2.27)	-6.05 (3.65)	-6.16 (3.09)*	-10.88 (1.97)***	-7.36 (3.81) <sup>†</sup>	-5.14 (3.66)	6.77 (3.48) <sup>†</sup>
Cluster - Dummy 2	-18.70 (2.26)***	-10.74 (3.64)**	4.97 (3.08)	-1.47 (1.97)	.03 (3.81)	-13.79 (3.65)***	-2.62 (3.48)
Cluster - Dummy 3	1.24 (2.26)	-7.81 (3.63)*	14.51 (3.08)***	3.84 (1.96)	-1.78 (3.80)	.97 (3.64)	3.40 (3.47)
Cluster - Dummy 4	5.75 (2.25)*	.82 (3.63)	7.75 (3.07)	-.10 (1.96)	-4.87 (3.79)	-3.59 (3.63)	.38 (3.46)
Cluster - Dummy 5	-3.59 (2.26)	-12.64 (3.63)**	4.06 (3.08)	-15.32 (1.96)	-8.90 (3.80)*	2.65 (3.64)	-4.02 (3.47)
Cluster - Dummy 6	8.20 (2.26)***	-11.51 (3.64)**	19.78 (3.08)***	4.07 (1.96)	-1.36 (3.80)	-7.17 (3.64)*	-5.11 (3.47)
Cluster - Dummy 7	2.55 (2.26)	-11.30 (3.63)**	19.11 (3.08)***	-5.74 (1.96)**	-3.32 (3.80)	-12.50 (3.64)**	-4.36 (3.47)
Cluster - Dummy 8	-.64 (2.25)	-8.52 (3.63)*	2.98 (3.07)	-11.65 (1.96)***	-5.90 (3.80)*	-1.20 (3.63)	.76 (3.46)
Cluster - Dummy 9	3.17 (2.27)	-8.11 (3.65)*	11.51 (3.09)***	-14.85 (1.97)***	1.67 (3.81)	-4.27 (3.66)	-.70 (3.48)
Cluster - Dummy 10	8.62 (2.26)***	-1.62 (3.64)	3.13 (3.08)	1.51 (1.97)	6.42 (3.81) <sup>†</sup>	1.28 (3.65)	-14.24 (3.48)***
Cluster - Dummy 11	-1.10 (2.26)	-14.14 (3.63)***	15.38 (3.08)***	9.59 (1.96)***	1.77 (3.80)	1.97 (3.64)	-2.30 (3.47)
R <sup>2</sup>	0.17	0.04	0.10	0.31	0.03	0.05	0.04

Note.  $N=1096$ .

Payday coded 1=Payday, 0=Not payday. Holiday coded 1=Holiday, 0=Not holiday.

Cluster variables are dummy-coded (1/0) categories representing the 12 clusters of data downloaded from Google.

\*\*\*  $p \leq .001$  \*\*  $p \leq .01$  \*  $p \leq .05$  <sup>†</sup> $p \leq .10$

#### 4.2.6. Study 1 Discussion and Limitations

The results of Study 1 provide promising support to my conceptualization of payday as a temporal landmark. Specifically, these results suggest that, for several of the search terms examined, individuals do indeed meaningfully alter their behaviors (as operationalized by Google search behavior) with the arrival of payday. Specifically, I found that individuals were significantly more likely to search for the term “payday” and significantly less likely to search for the term “anxiety” on paydays in Sweden, providing support to Hypothesis 2. Additionally, analyses indicated a significant or marginally significant decrease in Google searches on payday for diet terms that corresponded to self-control (LCHF and diet) and as well as an increase in searches for one term corresponding to stress (“Antidepressants”)<sup>1</sup>. While these results were in the opposite direction of prediction, they nonetheless provide additional evidence that payday is indeed functioning as a temporal landmark for individuals in Sweden. Taken as a whole, these findings provide preliminary support to the idea that payday functions as a critical day that meaningfully stands out to individuals. I speculate below as to why these specific results were in the opposite direction of prediction.

Despite these encouraging findings, this study is not without limitations. While I did find variation for several of the variables that coincided with payday, many of the terms that I searched did not have meaningful variation on payday, or had significant variation in the opposite direction of prediction. The former may be because the individual experience of these phenomena do not meaningfully vary on payday.

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<sup>1</sup> I similarly found significant results for searches for the term “Netflix”, however, because these were not significant when controlling for day of the week, I do not discuss the implications of these findings.

Alternatively, it may be that individuals do not choose to search these specific terms in Sweden when they experience these feelings or states, or there are other cultural norms around payday in Sweden specifically that may change the nature of these relationships. For example, although diet and LCHF may be representative of personal control in an American culture, these may also be in contrast to the celebratory atmosphere that the country of Sweden may have assigned to the rhythm of paydays. Or, it may be possible that individuals search diet-related terms when they are feeling less in control (i.e., after a lapse in control prompts them to undertake a diet). Additionally, it may be that individuals feel more cash-flush and in control of their well-being to seek out antidepressants, and this is why I found a significant increase in Google searches for these days. Thus, while the findings of this study indicating significant changes on payday are encouraging, alternative explanations for the feelings prompting the change in term volume (i.e., personal control) cannot be empirically ruled out in this sample. Given these potential alternative explanations, a direct, within-person measure of these constructs would provide clearer evidence as to whether these specific constructs (i.e., personal control, stress, etc.) vary on payday as well as more clearly establish the direction of this potential variation. To address this, I directly measure these variables in Study 2.

Further, the dates operationalized as representative of payday in this study are only approximate representations of overall paydays in Sweden. That is, although the 25<sup>th</sup> of the month is a most common payday in Sweden (Unionen), there exists variation within the country as a whole, as has been demonstrated in other studies of Swedish payday (Andersson et al., 2015). That is, some Swedish employees may receive their

paychecks on other days that are not the 25<sup>th</sup> of the month, which was an assumption made in these data. However, robustness checks of the data (i.e., alternative weekend coding schemes) resulted in very little change to the overall significance or pattern of the results found in this study. Further, this approximation represents a conservative test of the temporal landmark nature of the data, as many search terms significantly increased or decreased on the 25<sup>th</sup> of the month despite any potential variation in experienced paydays among Swedish citizens. Still, a secondary study where payday is precisely and strictly defined at the organizational level could help provide additional support to this assertion.

Finally, these data were limited to a specific country with a distinct pay schedule, where cultural differences in the understanding of money and the value of payday may exist with between-person differences existing among individuals. Sweden is a country with substantially lower levels of income inequality than the United States. The GINI coefficient (a 0 to 1 measure of income dispersion within a given area, where 0 = “complete equality” and 1 = “complete inequality”; OECD, 2018) for Sweden is .3, compared to the United States’ .4. Thus, this societal value may allow for some additional natural control over the extent to which income levels may influence this phenomenon at the between-person level given an overall national tendency for less between-person differences in wealth. Still, additional research is needed to understand how the phenomenon occurs within individuals in the work domain. A within-individual study would remove any of the potential confounding factor of between-individual salary or wealth differences, as well as contextualize the payday phenomenon specifically in the organizational domain. Thus, I designed my second study to examine how working individuals experience payday on a biweekly basis.

## 4.3 Study 2: Field Study

### 4.3.1 Participants and Design

**Study Participants.** Participants in this study were staff employed at various public universities across the Southeastern United States. This sample was chosen because of the transparency in pay dates publicly provided by universities' Human Resource departments which allowed for precision in establishing pay dates and payday consistency across participants. These staff were paid biweekly on Fridays (i.e., every other Friday), which allowed for control of any potential day-of-the-week effects and uniform pay schedules across organizations. Participants were identified and recruited via email for potential participation utilizing publicly available data listing all individuals in staff roles in conjunction with directory data that publishes employee email addresses. Similar roles were targeted across universities, and included administrative staff, executive assistants, custodial and maintenance staff, and other office and clerical roles to limit large between-person variations in job roles or salaries. Participants were sent a recruitment email with information about the research study, the study duration, and a link to the initial survey for potential participation. In the recruitment email, participants were told that they would receive \$2 for each survey completed as a part of the study and a bonus (\$4) for completing 75% of surveys, for a total possible compensation of \$30.00. Participants who wished to participate in the study clicked the link were taken to complete the consent form and initial survey, and all participants who completed the initial survey were enrolled for the weekly study emails. Enrollment closed at midnight the night prior to the weekly study email. Participants were paid via Paypal, with money transferred directly to an email address that they provided in the initial survey.

**Sample Characteristics.** 101 participants enrolled by completing the initial survey, however, 13 individuals did not complete any further surveys. Thus, the final N for analysis in the study was 88 participants. Following the procedures outlined in Goodman and Blum (1996), I conducted attrition analysis to determine whether any significant differences existed between these 13 individuals who chose to exit the study after completing the initial survey and the remaining 88 participants in the sample (i.e., non-random sampling). Multiple logistic regression of key demographic variables indicated no significant group differences that would demonstrate non-random attrition between these two groups of participants. Thus, there was no evidence of non-random attrition in the sample.

This final sample of 88 employees sample was an average age of 38.3 years ( $SD = 11.06$ ) and was 75% female and 24% male (1% of participants provided no response). The sample was 42% White, 37.5% Black, 10.2% Hispanic or Latino, 6.8% Asian, and 3.4% selected "Other". 28.4% of participants indicated that they had children under the age of 18 at home, with an average number of 1.5 children per household of those that had children. 33% of participants had a master's degree, 46.6% had a bachelor's degree, 17.0% indicated they had completed some university or college, and 3.4% had completed some or all of high school. Average tenure reported was 5.73 years. The sample was predominately full-time employees (94%). In considering potential household earning partners, 48.9% indicated that they were part of a 1-income household and 51.1% indicating that there were multiple providers in their family. Finally, 68.2% of participants indicated that they were the primary income provider in their family.

**Study Design.** The study was run over a period of six weeks plus one initial survey that captured individual difference and demographic variables. This weekly within-person design captured three paydays and three non-paydays. To ensure full enrollment, participants were recruited for participation in several rounds, with each round of the study lasting for six weeks of weekly surveys. After completing the initial survey to enroll in the study, participants received an email every Friday and Saturday for a six week period<sup>2</sup>. Each survey was sent via email utilizing the Qualtrics platform and contained measures of the mediator and dependent variables. All of the weekly surveys could be completed by smartphone or computer and took roughly five minutes for completion.

The surveys consisted of two surveys in a 48 hour period (Survey A and Survey B) to capture potential delayed effects in recovery variables. The mediator variable and all outcomes except recovery were captured in the first daily survey (Survey A) and the recovery variable was captured in the second daily survey (Survey B). Survey A was sent at noon on Friday, and remained open through Friday at midnight. Survey B was on Saturday at noon, and remained open until Sunday at noon. Participants could not complete a survey after the closing period.

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<sup>2</sup> One round of data collection occurred over a major American holiday (Thanksgiving) in which employees likely would not be at work on Friday given the proclivity for universities to close on the Friday following the Thanksgiving holiday. For this round, this week was a priori excluded as a data collection day and an additional data collection day was added to the end of the study. Participants still completed three paydays and three non-paydays for a total of six weeks of study participation.

### 4.3.2 Measures

Unless otherwise noted, all measures were captured on a 7-point Likert scale ranging from 1 = “Strongly Disagree” to 7 = “Strongly Agree”. Full scale items are reported in Appendix B.

**Payday.** The independent variable of payday was created by coding a value of 1 = “Payday” and 0 = “Not payday” that corresponded to each set of surveys. Paydays were determined using publicly available pay date calendars obtained from university Human Resources department websites. Each participant’s respective values for this variable were coded according to the pay calendar that corresponded to their specific organization.

**Sense of personal control.** Sense of personal control was captured in Survey A of the daily surveys. I operationalized sense of personal control by adapting the seven item environmental mastery subscale from Ryff (1989)’s scales of psychological well-being. Environmental mastery represents the extent to which one has competence in controlling their environment and external activities and can “create contexts suitable to personal needs and values.” (Ryff, 1989, p.727). Individuals who are low in environmental mastery struggle with managing their daily activities and affairs and lack a feeling that they can control their external environment. Thus, this scale should capture the extent to which one feels a sense of personal control over their externalities, consistent with other research that has utilized mastery scales to measure an individuals’ perceived control (e.g., Wanberg & Banas, 2000; Judge & Hurst, 2007). In line with previous research that has adapted subscales from this Ryff (1989)’s psychological well-being inventory for momentary use (Bosson, Prewitt-Freilino, & Taylor, 2005), I adapted these items to refer to one’s feelings that day. Participants were asked to indicate their agreement with

statements regarding their sense of personal control that day, with sample items including, “Today, I feel that I can manage the responsibilities of my daily life” and “Today, I feel that I can juggle my time so that I can fit everything in that needs to be done.” Average Cronbach’s alpha across 6 days ranged from .79 to .86, with a mean alpha of .83.

**Work specific self-efficacy.** Work specific self-efficacy was captured with ten items in Survey A of the daily surveys. Following work by Bandura (2006), and consistent with the conceptualization of self-efficacy as being a motivational state (as compared to a more stable trait) when it is applied to a specific domain (Chen, Gully, & Eden 2001), I captured confidence for specific job tasks rather than general feelings of self-efficacy. Due to the likelihood of a variety of specific work tasks in the sample, I used an adapted version of the scale developed by Riggs and Knight (1994) that measures domain-specific self-efficacy in the broader work domain. This scale has been utilized in the management literature to capture domain-specific self-efficacy at work (Kark, Shamir, & Chen, 2003). Participants were asked to indicate their agreement with statements regarding how they felt that day about their job, skills, and abilities including “Today, I have confidence in my ability to do my job” and “Today, I am very proud of my job, skills, and abilities.” Average Chronbach’s alpha across the six measurement occasions of the study was .86, with a range of .83 to .90.

**Stress.** Stress was captured in Survey A of the daily surveys. Stress was measured with four items from of Caplan, Cobb, French, Van Harrison, and Pinneau (1980)’s anxiety scale, which has been used as an indicator of stress in relation to money (Tang, 1993). Participants were asked to indicate their agreement with statements concerning

how they felt that day. Example items include “I feel nervous” and “I feel calm” (reverse-coded). Cronbach’s alpha for this scale ranged between .82 and .88, with an average reliability of .85 across the six measurement occasions.

**OCB-I.** OCB-Is were measured in Survey A of the daily surveys. OCB-Is were measured using six items from Dalal et al. (2009) adapted for daily application with a focus on citizenship behaviors toward coworkers or supervisors. Participants indicated their agreement with statements describing their interpersonally directed behaviors that day. Sample items are “Today I”...“Tried to help my supervisor or coworker” and “Went out of my way to be nice to my supervisor or coworker.” Cronbach’s alpha for this measure ranged between .83 and .91, with an average reliability of .87 across the six measurement periods.

**OCB-O.** OCB-Os were measured in Survey A of the daily surveys. OCB-Os were measured with 6 items from Dalal et al. (2009) adapted for daily application that focus on OCBs toward the organization. Participants indicated their agreement with statements regarding their organizationally-directed behaviors that day, including “Today I”...“Volunteered for additional work tasks” and “Went above and beyond what was required for the work task.” The mean Chronbach’s alpha for this measure was .82 and ranged between .76 and .86.

**Recovery Experiences.** Recovery experiences were measured in Survey B of the daily surveys. Recovery was measured with 16 items from Sonnentag and Fritz (2007). Participants indicated their agreement with statements regarding their time outside of work since Friday, with sample items including “I forgot about work” and “I kicked back

and relaxed.” Average Chronbach’s alpha for this measure was .93 and ranged between .91 and .95.

#### **4.3.3 Control variables**

To rule out possible confounds, I measured and controlled for several variables. I controlled for state positive affect, as this could plausibly occur on payday. This was collected using a 5-item short version of the PANAS with participants indicating the extent to which they felt “alert”, “inspired”, “determined”, “attentive,” and “active,” in daily Survey A. This scale was anchored on a 5-point Likert Scale ranging from 1 = “Not at all” to 5 = “Extremely” (Thompson, 2007;  $Range_{\alpha} = .82 - .92$ ,  $M_{\alpha} = .88$ ). Additionally, I measured and controlled for deviations in the amount of the paycheck, due to overtime or otherwise, to ensure that an abnormal paycheck fluctuation did not bias my results. This was measured with the following item in daily Survey A: “Relative to your normal biweekly paycheck, is this amount of this paycheck” with response options provided on a 1-5 scale (1 = “well below normal”, 2 = “a bit less than normal”, 3 = “normal or about normal”, 4 = “a bit more than normal”, 5 = “well above normal”, as well as the option 6 = “did not receive a paycheck”). These responses were dummy-coded into two dummy-coded variables representing three distinct alternatives: negative deviation (those days when paychecks were below normal paycheck amounts) and no variation (those days when paychecks were equal to normal paycheck amounts, as well as days that were not payday or where the participant did not answer the question), with positive variation (those days when paychecks were above normal paycheck amounts) being the referent category. This dummy-coding ensured that complete data for non-paydays were still included in analysis. To ensure that work-relevant variables were captured on a day that

the employee actually was present at work, I controlled for whether an employee indicated they worked that day (1 = worked, 0 = did not work).

I also elected to measure and control for payday salience cues to understand whether participants had an experiences that might increase their awareness of payday. Payday salience cues were measured in the daily survey A with a checklist that measured items capturing physical awareness of their actual paycheck. Specifically, participants indicated whether they had experienced any potential salience cues by checking items that applied from a list of two items that included “Receive a physical check or paystub” or “Review bank statements (online or otherwise) and view that you have received your paycheck.” Responses were coded for the presence or absence of salience cues, such that 1 = salience cues, 0 = no salience cues.

**Demographics.** I also measured key demographic variables in the initial survey (e.g., age, gender, education status, tenure, number of children, full-time or part-time employment) for data reporting purposes to capture the nature of the participants enrolled in the study. Additionally, to understand the personal financial situation of participants in my data, I measured individual several key household financial variables, capturing whether participants were part of a 1- or 2-income household and whether they were the primary provider for their household.

**Marker variable.** Finally, in order to understand any potential common method variance (CMV) within my data, I measured a theoretically unrelated “marker” variable so as to provide an estimate of CMV if needed (Lindell & Whitney, 2001; Richardson, Simmering, & Sturman, 2009). I measured state nostalgia to act as a marker variable using three items from Wildschut, Sedikides, Arndt, and Routledge (2006). This scale

had high reliability across days ( $\text{Range}_\alpha = .95 - .99$ ,  $M_\alpha = .98$ ) and included items such as “Right now, I am feeling quite nostalgic” and “Right now, I am having nostalgic thoughts.” with nostalgia defined as “feeling sentimental or wistful for the past.”

#### **4.3.4 Analytic Strategy**

Direct effects (i.e., tests of all non-mediated hypotheses) were examined using multilevel modeling through the Hierarchical Linear Modeling 7 software package (HLM 7; Raudenbush, Bryk, & Congdon, 2013). I centered all variables within-person (CWC centering; Hofmann & Gavin, 1998; Enders & Tofghi, 2007) to remove all between-person variation in these variables. This method of centering allows for the interpretation of within-person effects and removes any trait level variance from these variables, allowing me to rule out between-person differences as confounders to the relationships between level-1 predictors and the outcome variables. Given that the entirety of my hypotheses were at the within-person level, all variables were centered using this technique.

#### **4.3.5 Results**

Descriptive statistics and bivariate correlations for all variables are included in Table 3.

**TABLE 3****Means, standard deviations, and correlations for Study 2 variables**

<i>Variable</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Payday	0.47	0.50	-	-.01	.02	-.06	.21*	.09	-.01	.06
2. Sense of Personal Control	5.33	1.15	.05	-	.60**	-.74**	.01	.08	.38**	.48**
3. Self-efficacy	5.82	0.93	.04	.52**	-	-.61**	.17	.18	.24*	.45**
4. Stress	2.51	1.34	.01	-.62**	-.50**	-	-.05	-.21**	-.36**	-.50**
5. OCB-I	4.80	1.27	.03	.15**	.25**	-.08	-	.62**	-.03	.19
6. OCB-O	4.29	1.31	-.01	.12*	.23**	-.16**	.64**	-	-.20	.52**
7. Recovery	5.41	0.72	.03	.35**	.26**	-.33**	.10	-.02	-	.10
8. Positive Affect	3.15	1.01	-.01	.38**	.39**	-.39**	.22**	.42**	.15*	-
9. Salience Cues <sup>a</sup>	0.27	0.44	.19**	.06	.04	-.08	-.01	.03	.04	.05
10. Negative Paycheck Deviation <sup>b</sup>	0.08	0.28	.12*	.05	-.04	.04	.07	.17**	-.09	.07
11. No Paycheck Deviation <sup>b</sup>	0.84	0.36	-.16*	.04	.09	-.02	-.08	-.23**	.08	-.15**
12. Positive Paycheck Deviation <sup>b</sup>	0.07	0.26	.15	-.01	-.09	-.05	-.02	.08	.00	.05
13. Worked Friday <sup>c</sup>	0.88	0.33	.01	.14**	.11*	-.08	.17**	.08	.07	.08
14. Worked Weekend <sup>c</sup>	0.02	0.16	.04	-.03	-.06	.02	-.07	.07	-.09	.05

(Table 3 continues on next page)

Table 3 (continued)

<i>Variable</i>	9	10	11	12	13	14
1. Payday	.25*	.14	.00	.03	.09	.08
2. Sense of Personal Control	.08	-.22*	.19	.05	.21	-.06
3. Self-efficacy	.03	-.08	.18	-.14	.21	.01
4. Stress	-.21	.03	-.08	-.08	-.24*	.04
5. OCB-I	-.01	-.02	-.08	.09	.16	.08
6. OCB-O	.14	.08	-.21	.14	.00	.20
7. Recovery	.18	-.28*	.29*	.03	-.04	-.06
8. Positive Affect	.14	-.01	-.03	.02	.07	.18
9. Salience Cues <sup>a</sup>	-	.07	.01	.10	.07	.00
10. Negative Paycheck Deviation <sup>b</sup>	.02	-	-.67**	-.11	-.02	.29*
11. No Paycheck Deviation <sup>b</sup>	-.10	-.62**	-	-.46**	-.02	-.34**
12. Positive Paycheck Deviation <sup>b</sup>	.19**	-.08	-.58**	-	.09	.14
13. Worked Friday <sup>c</sup>	.09	.02	.02	.04	-	-.13
14. Worked Weekend <sup>c</sup>	-.03	.08	-.10	-.04	-.11	-

Note. N = 261-371 for within-person (Level-1) correlations. N= 76-88 for between-person (Level-2) correlations. Level-1 (within-person) correlations are shown below the diagonal. Level-2 (between-person) correlations are shown above the diagonal. Level-2 correlations are correlations between each variable aggregated to the between-person level across all measurement occasions.

<sup>a</sup> 1 = Salience cues; 0 = No salience cues

<sup>b</sup> Dummy coded variable representing whether paychecks were above normal, about normal or not occurring, or below normal. 1= Deviation; 0 = No deviation

<sup>c</sup> 1 = Participant worked; 0 = Participant did not work

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

Before beginning hypothesis testing, I first examined the non-dichotomous criterion variables to determine the extent of within- and between-person variance. To do this, I ran empty models in HLM7 with each of my key variables entered as a criterion variable with no predictors. The results of these models indicated substantial within-person variance for my main study variables of sense of personal control (56%), self-efficacy (28%), stress (41%), OCB-I (50%), OCB-O (48%), and recovery (54%). Thus, these data support the use of multi-level modeling. These results are reported in Table 4.

**TABLE 4**

**Between and within-person variance of criterion variables**

Variable	Within-person variance	Between-person variance
Personal Control	56%	44%
Self-Efficacy	28%	72%
Stress	41%	59%
OCB-I	50%	50%
OCB-O	48%	52%
Recovery	54%	46%

**4.3.6 Confirmatory Factor Analysis**

I ran a confirmatory factor analysis (CFA) of latent variables that were collected at the same time (i.e., Survey A) to examine discriminant validity and ensure that the scales utilized in the current model were perceived as distinct by participants. Because all observations were nested within-individuals, I conducted a multilevel confirmatory factor

analysis (MCFA) using the lavaan<sup>3</sup> package for the R environment (Huang, 2017). I followed procedures to generate a level-one CFA model where estimates are unbiased due to clustering within individual (Huang, 2017, p.7). Additionally, I utilized an item parceling approach to ensure appropriate convergence given the large number of indicators being examined in the CFA. By reducing the number of parameters being estimated in CFAs, item parceling can generate more parsimonious models (Little, Cunningham, Shahar, & Widaman, 2002). I followed procedures outlined by Mathieu and Farr (1991) to create item parcels for each of the latent variables being modeled in the CFA. I created item parcels for each of the variables which resulted in a total of three indicators each for personal control, stress, OCB-I, OCB-O, five indicators for self-efficacy, and two indicators for positive affect.

I then tested the full model of six factors, as well as two alternative five-factor models and a four-factor model in which I loaded items for conceptually similar scales onto a shared factor rather than separate factors. For the five-factor models, I tested one model in which the items for personal control and self-efficacy were collapsed to single latent variable, and one model in which OCB-I and OCB-O items were collapsed to a single latent variable. For the four-factor model, I included both of these latent variables so that personal control and self-efficacy items loaded onto a single factor, and OCB-I and OCB-O items loaded onto a single factor.

Results of these analysis indicated that the six-factor model fit was an acceptable fit to the data ( $\chi^2 = 297.00$ ,  $df = 137$ ,  $p = 0.00$ ; CFI = .92; RMSEA = .065 [90% CI: .055,

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<sup>3</sup> Although the lavaan package does not contain built-in procedures for conducting a multilevel confirmatory factor analysis, I utilized a recently developed function (mefa.input) which was developed by Huang (2017) that allows for the explicit incorporation of nested data in confirmatory factory analysis.

.075]; SRMR = .055) with superior fit statistics as compared to the five-factor model collapsing self-efficacy and personal control ( $\chi^2 = 399.94$ ,  $df = 142$ ,  $p = 0.00$ ; CFI = .87; RMSEA = .081 [90% CI: .072, .091]; SRMR = .066) or the four-factor model collapsing both self-efficacy and personal control into a single factor and OCB-I and OCB-O into a single factor ( $\chi^2 = 403.78$ ,  $df = 146$ ,  $p = 0.00$ ; CFI = .87; RMSEA = .08 [90% CI: .071, .089]; SRMR = .066). The five-factor model collapsing across the two OCB scales also fit the data acceptably ( $\chi^2 = 301.19$ ,  $df = 142$ ,  $p = 0.00$ ; CFI = .92; RMSEA = .064 [90% CI: .054, .074]; SRMR = .055). This finding supports research within organizational behavior suggesting a unidimensional measure of OCBs that combines both interpersonally and organizationally directed citizenship behaviors can be appropriate, as these dimensions tend to be substantially correlated (Judge, Simon, Hurst, & Kelley, 2014). Because I hypothesized distinct differential relationships for each dimension, I retained the model with these items loading onto distinct factors depending on the target of the behaviors. However, in light of these results, I also examined my hypothesized relationships in terms of a single OCB factor rather than the two distinct factors representing interpersonally and organizationally directed OCBs (see Footnote 6 for these findings).

#### **4.3.7 Hypothesis Testing**

**Overview of model testing.** To test my hypothesis of the direct effect of payday on the criterion variables of interest, I conducted multi-level regression analysis using HLM7. For all models occurring on payday, I controlled for paycheck salience cues, paycheck amount deviation, positive affect, and whether the individual indicated they worked that day as each of these could theoretically influence the extent to which payday

influenced individual variation in outcomes. For the lagged payday effect (i.e., recovery), I controlled for whether the individual worked on the weekend as well as indications of salience cues and paycheck amount deviation. All variables were modeled as fixed effects on the criterion variables of interest.

**Direct effects.** For each hypothesized direct effect relationship (i.e., Hypotheses 1, 2, 4, 6, 8, 9, and 11) I regressed the respective criterion variable on the dummy-coded payday variable with the aforementioned control variables. Hypothesis 1 predicted a direct effect of payday on a sense of personal control. The results of this regression did not indicate a significant effect of payday on personal control ( $\gamma = .11, p = .22$ ). Thus, Hypothesis 1 was not supported. Hypothesis 2 suggested a direct effect of payday on task-specific self-efficacy. Results did not support a significant direct effect of payday on task-specific self-efficacy ( $\gamma = .06, p = .32$ ), and Hypothesis 2 was not supported. Payday did not significantly influence stress experienced on payday, and thus my results failed to provide support to Hypothesis 4 ( $\gamma = .06, p = .56$ ). Hypotheses 6 and 7 were also unsupported as payday did not significantly predict either of the citizenship behaviors that I investigated, with  $\gamma = .01, p = .93$  for OCB-I and  $\gamma = -.05, p = .58$  for OCB-O.<sup>4</sup> Finally, these results failed to support Hypothesis 10, which predicted a positive effect of payday on weekend recovery behaviors ( $\gamma = .04, p = .61$ ). The findings of this study fail to support the idea that payday has a direct effect on critical workplace variables. The results of these regressions are shown in Table 6.

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<sup>4</sup> Although not hypothesized, I also ran the same model predicting a single measure of OCBs as the dependent variable which combined all OCB items because of the findings of the CFA combining these scales to a single factor. These results did not indicate any alternative effects of payday on OCBs when considered as a combined scale.

**TABLE 6****Multilevel Regressions Predicting Study Variables for Friday Effects**

Variable	Sense of Personal				
	Control	Self-efficacy	Stress	OCB-Is	OCB-Os
Fixed effects					
Intercept	5.33 (0.09)***	5.78 (0.09)***	2.51 (0.12)***	4.79 (0.11)***	4.29 (0.12)***
Payday	0.11 (0.09)	0.06 (0.06)	0.06 (0.10)	0.01 (0.08)	-0.05 (0.09)
Positive Affect	0.45 (0.09)***	0.23 (0.09)**	-0.35 (0.12)**	0.16 (0.11)	0.23 (0.12)*
Salience Cues	-0.06 (0.12)	0.02 (0.07)	0.01 (0.14)	0.01 (0.10)	-0.10 (0.15)
Worked Friday	0.35 (0.18)*	0.21 (0.12) <sup>†</sup>	0.08 (0.16)	0.80 (0.22)***	0.30 (0.25)
Negative Paycheck Deviation	0.67 (0.30)*	0.42 (0.27)	-0.40 (0.25)	0.42 (0.54)	0.43 (0.45)
No Paycheck Deviation	-0.07 (0.18)	0.15 (0.10)	0.12 (0.17)	-0.15 (0.18)	-0.27 (0.22)
Variance Components					
Intercept	0.58	0.66	1.07	0.83	0.98
Level-1 residual variance	0.67	0.25	0.73	0.76	0.80

*Note.* Level 1 N=346 observations for Sense of Personal Control. Level 1 N=347 observations for Self-efficacy, Stress, OCB-I, and OCB-O. Level 2 N = 85 individuals. Unstandardized estimates reported with standard errors in parentheses.

<sup>†</sup>  $p < .10$ ; \* $p \leq .05$  \*\* $p \leq .01$  \*\*\* $p \leq .001$ .

**TABLE 7****Multilevel Regressions Predicting Study Variables for Weekend Effects**

Variable	Recovery
Fixed effects	
Intercept	5.33 (0.07)***
Payday	0.03 (0.07)
Salience Cues	-0.13 (0.11)
Worked Weekend	-0.95 (0.17)**
Negative Paycheck Deviation	0.32 (0.28)
No Paycheck Deviation	0.16 (0.15)
Variance Components	
Intercept	0.25
Level-1 residual variance	0.28

*Note.* Level-1 N = 255 observations. Level 2 N=71 individuals. Unstandardized estimates reported with standard errors in parentheses.

†  $p < .10$ ; \* $p \leq .05$  \*\* $p \leq .01$  \*\*\* $p \leq .001$ .

**Indirect effects.** In addition to the direct effects, I also hypothesized the indirect effect of payday on each of the respective criterion variables (self-efficacy, stress, OCB-I, OCB-O, and recovery) as transmitted through the mediator of a sense of personal control. One of the key tenets of mediation is the direct relationship between the independent variable and the mediator variable (Baron & Kenny, 1986). As noted above, I did not find support for this relationship as payday did not significantly predict a sense of personal control. Thus, I did not find support for any mediation through personal control, and Hypotheses 3, 5, 8, 9, and 11 were not supported.<sup>5</sup>

#### **4.3.8 Study 2 Discussion and Limitations**

Study 2 represents an important test of the application of money priming theory to payday as a specific money prime. Specifically, in this study, I examined whether, at the within-person level, employed individuals experience meaningful variation in their attitudes and behaviors in concert with the arrival of payday. The results of Study 2 largely did not mirror Study 1 as the hypotheses tested with these data were unsupported. That is, employees did not appear to exhibit significantly different levels of these behaviors on payday and non-payday in these data, and these results do not provide specific evidence of payday as a temporal landmark.

There are several limitations of this study that may have contributed to the lack of support for these hypotheses. First, this study was conducted within a very specific context of employees. While this was by design to limit significant variation in the day-

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<sup>5</sup> Because the hypothesized mediation relationships measured in Study A would be the primary relationships that could potentially be influenced by the presence of common method bias, I did not further utilize the measured marker variable to test for common method variance. My results did not indicate the presence of significant mediation thus eliminating concerns about inflated results due to common method bias.

to-day experiences and roles of study participants, it may nonetheless be that the industry (i.e., academia) or types of clerical and staff roles included may not be those that experience significant variations in behaviors with the arrival of payday. For example, recent work by DeVoe, Pfeffer, and Lee (2013) found that as individuals made more money in exchange for their labor specifically (e.g., not in an inheritance or other random, non-earned receipt of money), they placed more importance on the value of money. In fact, the authors specifically quote former Novartis CEO Daniel Vasella as an example of this phenomenon, citing: “the more I made, the more I got preoccupied with money. When suddenly I didn’t have to think about money as much, I found myself starting to think increasingly about it.” (DeVoe, Pfeffer, & Lee, 2013, p. 1078). Thus, it may be that industries that are notorious for being arenas for chasing and building wealth, where individuals have self-selected in with these specific goals, may have more prominent payday effects than does academia.

Additionally, these data were collected only on payday or immediately after payday (for recovery variables) under the assumption that the arrival of the day itself is a temporal landmark. While this is in line with the theorizing presented above, it is plausible that payday may act as a somewhat “muddier” temporal landmark in roles where individuals do not receive any salient reminders of pay without seeking it out. While I did capture salience cues experienced by employees, there were a relatively low number of salience cues reported compared to the total number of observations (107 out of 371 of the responses provided in Survey A reported a salience cue). Thus, this somewhat low base rate could be masking the potential effects of salience cues on the outcomes. That is, experimental designs capturing money priming theory have generally

relied on tangible, visual cues (such as pictures or word scrambles) to induce money priming effects where the entire population receiving the prime receives a visual cue. In this study, a much smaller subset of the population received these cues on payday than in traditional money priming studies. Additionally, 38 of the salience cues reported actually occurred on non-payday where individuals reported checking their bank account on non-payday, which could have actually acted as a paycheck reminder prime in itself.<sup>6</sup> Although these findings generally did not indicate that visual cues made a significant difference in the variation of the outcomes examined in this dissertation, there was nonetheless a relatively low base rate for examining this phenomenon, and thus this explanation cannot be ruled out. Thus, these results may have been dampened by a lack of physical salience cues that served as a visual reminder of payday.

Finally, these variables in terms of self-report scales differed in nature to those in Study 1, which were operationalized by Google search terms. While this was by design in order to understand this phenomenon at the within-person level, these loose matches (e.g., Google searches for diet as compared to self-report feelings of personal control with a validated scale) may be a reason why I did not find significant results in this study. Future research could perhaps consider also measuring direct exemplar behaviors that map on to these constructs, such as exercise or eating behaviors, to better uncover the relationship between these variables in Studies 1 and 2.

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<sup>6</sup> All analyses were re-run to exclude these 38 cases. Reported relationships between both payday and salience cues with focal variables remained unchanged in terms of pattern and significance.

## CHAPTER 5

### GENERAL DISCUSSION, IMPLICATIONS, AND CONCLUSION

#### 5.1 Discussion

In general, Americans have a fascination with all things money: how it is spent, how it saved, how it is earned, and, particularly, who has the most of it (White, 2017). This consistent attention toward the topic has prompted a greater academic interest in exploring the wide-ranging effects of money on individuals; money (and the receipt of it in particular) is often cited as a key reason why individuals feel or behave in a certain way. Money (in the form of incentives) is a primary way that organizations actively seek to influence employee attitudes and behaviors at work, given its importance in overall society (Gerhart & Rynes, 2003). Researchers have devoted considerable effort to understanding how our receipt of money (particularly in the form of a payday) influences our behaviors and attitudes outside of the context of the workplace, with effects on factors such as cognitive processes and functioning (Mani et al., 2013; Spiller, 2011) and even death (Evans & Moore, 2011; Andersson et al., 2015). Investigation of this phenomenon lent naturally to the organizational context, given the organization's role as the source of paydays. However, the results of this study are mixed in support of payday effects. Archival data from Google searches provided encouraging support that individuals do alter behaviors on payday in terms of their Google search patterns, suggesting that payday likely acts as a temporal landmark. Specifically, for terms that represented payday itself, stress, and personal control in terms of diet, individuals were significantly likely to have meaningfully different search behaviors on payday.

Conversely, a within-person study in the organizational context indicated that payday effects, at least in terms of personal control, self-efficacy, stress, OCB-Is, OCB-Os, and recovery are nonexistent. This evidence does not support the idea that payday meaningfully and substantially influences how people feel or behave at work in terms of the variables that may be most theoretically relevant according to money priming theory.

## **5.2 Theoretical Implications**

In this dissertation I sought to make three key contributions to organizational literature and theory. First, I examined whether there are timing effects inherent in the experience of payday. Specifically, I sought to understand whether there was a “when” component of compensation, consistent with the theoretical idea of capturing the “when” of theory (Whetten, 1988). Scholars have determined that specific characteristics of pay can influence the extent to which pay affects people at work, including the method (e.g., incentive pay or standard pay; Jenkins et al., 1998), the amount or level of pay (Judge et al., 2010), or the structure of the pay itself (Gerhart & Rynes, 2003). And yet, it remained heretofore unknown as to whether the receipt of pay had direct, immediate effects on individual thoughts and behaviors at work. The results of this dissertation provide mixed evidence for a timing effect on individuals. That is, Study 1 indicates that at a greater societal level, there is evidence that payday influences individual cognitions and resultant behaviors. The archival data utilized in Study 1 of this dissertation displayed meaningful timing effects that coincided with the receipt of pay. Specifically, Google search behaviors in Sweden exhibited observable sensitivity to payday, with Swedish residents being significantly more or less likely to search for certain terms on payday. However, these effects were not echoed in the within-person study of employees. These mixed

findings raise an interesting question in regards to this contribution: is there, in fact, a “when” component to compensation wherein timing matters?

I suggest that in response to this question, these data lead to two distinct conclusions. First, in regards to my first contribution, I argue that the data support the presence of timing effects. That is, based on the results of Study 1, there is some component of our compensation that initiates day-of change in the way individuals behave and think, and thus scholars should further explore potential timing effects in pay. Second, it is clear that the specific variables in which I examined these timing effects were not the variables in which employees experience direct effects of payday timing, at least in the context in which they were measured (i.e., academia). This suggests interesting conclusions regarding theoretical explanations for how individuals think about money. In this dissertation I sought to contribute to compensation research by integrating existing research about compensation and pay with social psychological research about cognitions about money. Specifically, money priming theory (Vohs, 2015; Vohs et al., 2006; Vohs et al., 2008) suggests that even the mere mention of, or subconscious exposure to, money or the idea of money leads significant changes cognitions and behaviors in individuals. Critically, these effects have been replicated in a substantial volume of studies (Vohs, 2015), and yet nearly all of these studies were conducted in a controlled laboratory environment. The conclusions drawn from these studies have been nearly entirely based on samples outside of the primary source of money for the overwhelming majority of individuals: the workplace (for exception see Beus & Whitman, 2017). Thus, in this dissertation I sought to contextualize this research to the

work domain to understand whether these effects held outside of the laboratory environment.

The hypothesized relationships in this study were not directly supported when tested in a sample of employees. Money priming theory was the key mechanism underpinning the majority of these hypotheses (with the exception of stress and recovery, which were drawn from literature on the effects of money on individual life more generally). The results of this study did not provide support for the ideas of money priming theory in application to the workplace. There are several potential reasons why these effects occurred. For one, it is possible that payday does not act as a salient enough prime to trigger the effects of money priming theory. Although Study 1 did indicate that payday meaningfully stood out to individuals, it is possible that perhaps a biweekly payday was less salient than a monthly payday. Perhaps the infrequent nature of payday as a monthly event heightens its salience, whereas bi-weekly paydays could be harder for employees to keep track of week after week. Or, alternatively, it could be that the effects of money priming are most present when individuals experience more visual, tangible primes. Laboratory studies investigating (and supporting) money priming have typically utilized photos of currency or word searches that could codify the idea of money in the psyche of individuals. It may be that in today's world of often digital, direct deposited checks, the visual cues that would lend payday to be a money prime may be lost. However, the findings of Study 1 nonetheless support the idea that payday as a specific event can be a salient driver of behaviors without a specific visual salience cue.

These results open up interesting questions regarding the application of money priming theory to the organizational context. The major propositions of money priming

theory have been supported in more than 165 studies as of 2015 (Vohs, 2015), which indicate that money salience can be a key influencer of individual behavior. Other researchers have similarly found mixed results for the tenets of money priming theory when specifically considered in the context of compensation (Beus & Whitman, 2017). This dissertation failed to support this theory in the workplace in particular, although evidence from the larger country-wide sample (i.e., Study 1) did provide some support for the greater tenets of the theory. Future research should continue to explore how this theory contextualizes to life in the organizations. It remains critically important that scholars continue to extend existing research on compensation to better understand the psychological components of money beyond what is currently known about pay's role in motivating behaviors and performance.

Finally, this research sought to establish payday as a temporal landmark. Again, the results of two studies provided mixed results in this endeavor. In Study 1, findings indicated that payday indeed acts a temporal landmark in Sweden, whereas Study 2 provided unclear evidence to these results. For example, the fact that some employees indicated viewing their bank accounts on payday suggests that at some level, payday is salient to individuals with behavioral implications. However, the variables examined did not specifically support that payday acts a temporal landmark in altering those attitudes or behaviors in particular. It may be that payday's role as a temporal landmark can be dependent upon the overall culture around the arrival of the day. Specifically, the results of these two studies suggest that this context dependency could be an important driver of whether payday indeed behaves as a temporal landmark. In Sweden, for example, payday is a consistent day (the 25<sup>th</sup> of the month as the most common day for employees;

Unionen) with a consistent temporal interval (once a month), within a larger, country-wide context, which may help contribute to its recognition as a temporal landmark. For employees in Study 2, employees across the organizations studied (i.e., universities) may have not even shared payday with other employees in their own organization. In universities, multiple pay cycles may be used such that groups of employees may differ in the temporal frequency of their paychecks (e.g., biweekly and monthly, depending on roles and exempt vs. non-exempt classifications within the organization). This within-institution variance on payday, and larger variance in society within the United States of biweekly, bi-monthly, weekly, and monthly payday may weaken the extent to which payday acts a temporal landmark. In organizations (or, as in Study 1, broader national cultures) with consistent, and perhaps organizationally or societally emphasized, paydays, payday may behave more strongly as a temporal landmark as was evident in Swedish Google search data. Thus, while this dissertation does not provide consistent evidence for payday's role as a temporal landmark, results nonetheless provide some support for the suggestion that payday may act as an important day that meaningfully stands out in organizational life. Additionally, these results point to the need for theoretical consideration of the role that cultural and/or organizational salience may play as an important boundary condition around the effects observed in this phenomenon.

These findings also offer an important extension to existing literature about payday behaviors more generally. That is, literature in finance and economics have demonstrated consistent payday effects in terms of spending and consumption patterns and evaluation of money-related decisions (i.e., opportunity cost evaluations; Spiller, 2011). The findings of Study 1 extend this to indicate even substantively unrelated

behaviors (i.e., Google searches for diet or stress-related terms) can be influenced by payday, supporting the overall strength and reach of potential payday effects.

### **5.3 Practical Implications**

The mixed findings in this research have several important implications for organizations and employees alike. For organizations, these results indicate that at the within-person level, there do not seem to be effects of payday for specific industries. However, at the between-person level, when the temporal landmark is more salient as it may be in Sweden, results indicate reduced interest in stress-related search terms, perhaps indicating a buffering effect of payday and reminders of the receipt of money for employees. Thus, employers may find that salient reminders of payday at the larger cultural level (e.g., company-wide reminders or emails about payday that encourage and celebrate payday as an event) may provide stress-buffering effects for employees.

Additionally, the results of Study 1 do indicate a presence of payday effects for individuals more generally. This is an important extension of existing knowledge that individuals are “excessively sensitive” to payday from a consumption standpoint, such that we see irrational consumption patterns that coincide with payday rather than income smoothing, even when accounting for changes in liquidity (Olafsson & Pagel, 2016; Stephens, 2006). The findings of Study 1 suggest payday responses beyond just consumption changes; instead, these data point to meaningful behavior changes that may indicate larger, non-consumption related outcomes (e.g., anxiety, diet initiatives, etc.). In other words, it appears that individuals aren’t just spending differently around payday; they may be thinking and behaving differently, too. Thus, organizations may benefit from, when possible, considering payday patterns of consumption to coincide with sales

or marketing campaigns and perhaps more generally seek to provide or promote products that map onto some of these behavioral or attitudinal changes (i.e., offering anxiety-reducing classes, offering diet promotions to counteract reduced interest, etc.).

From an individual employee perspective, these mixed results do indicate some effects of payday that are important to consider practically. Specifically, results indicated that individuals were less likely to search for stress-related terms (i.e., anxiety), and were also less likely to search for diet related terms on paydays in Sweden. Thus, individuals may be able to reduce stress by thinking about the positive aspects of payday. Coupled with findings on temporal landmarks by Dai et al. (2014), these results suggest that individuals should perhaps avoid diet initiatives on payday (and instead undertake such events on “fresh start” type landmarks, such as the first of the month) as the celebratory nature of the event may override impulse control specifically for food and drink-related initiatives. Finally, although the findings of this study were mixed as to whether payday acts a temporal landmark and cue towards money in line with money-priming theory, research generally indicates that money primes have caused individuals to engage in more self-serving and task-focused behaviors (Beus & Whitman, 2017, Vohs, 2015). Thus, when individuals are particularly looking to feel efficacious and task focused during the workday, they may benefit from self-priming themselves to think about money and their pay.

#### **5.4 Limitations and Future Research Directions**

This research has several limitations that point to future research ideas for scholars. First, I only measured paydays with one of two temporal characteristics (i.e., monthly in Study 1 and biweekly in Study 2) to isolate the potential effects of the day as

a money prime. However, the mixed findings between Study 1 and Study 2 raise questions about the temporal context in which paydays would be most salient. The results of Study 1 indicated that a single monthly payday was significantly salient for individuals in Sweden. In Study 2, I suggested that a biweekly payday (e.g., every other week) would be an appropriate lag in which payday would be meaningful and salient to employees in the United States. However, the data failed to support this presumption. Further, while these are two common temporal intervals in which individuals receive their paychecks, employers also frequently utilize weekly or semi-monthly intervals (Burgess, 2014). Thus, future research could examine how the interval length of payday might influence potential payday effects. It may be that such prominent effects existed in Study 1 because the payday's arrival was extremely salient due to its infrequency, or because of the cultural norms surrounding the arrival of that day.

Building upon this idea of cultural saliency, this potential explanation offers an additional opportunity for future research in examining how the cultural context (both organizational and national) around money and payday in particular may influence the strength or presence of payday effects. For example, in Sweden, it may be that payday's saliency due to its consistency across individuals, occupations, and roles within the country lead to a generally more celebrated and noticed event than in some U.S.-based organizations where payday may vary within employees even within the same organization, as is was the case in my sample. Thus, future research could examine whether cultural saliency and payday variance (at both the national and organizational level) might act as an important boundary condition around whether individuals experience payday effects. That is, in today's environment of direct deposit and

electronic banking without receipt of a physical paycheck, it may be that cultural norms and attitudes around the arrival of payday play a critical role in establishing whether or not payday is a salient temporal landmark to individuals.

Another interesting opportunity for future research on payday is regarding the specific temporal characteristics of the day as landmark. I operationalized payday in terms of the arrival of a single day in both Study 1 and Study 2. While this was most appropriate to test my theory of significant payday differences, it is possible that payday's nature as a key, anticipated life event for many individuals influences the timing in which payday effects occur. That is, it may be that individuals experience more gentle and building peaks or troughs in certain attitudes or behaviors that coincide with the anticipated arrival of payday, rather than exhibiting a sharp peak only on the actual arrival of the day. For example, for individuals paid on Friday as were the participants in this sample, it may be that anticipatory cognitions about the day's arrival causes important changes in attitudes and behaviors during the entire week of payday, or beginning the Wednesday before payday and building up until the arrival of payday, or on only the Thursday before payday, or some combination thereof. Thus, future research could examine the role of time in consideration of payday effects and explicitly measure employee anticipation in conjunction with these effects. Is it that individuals experience the effects of payday only on the day's arrival, or are there anticipatory effects that begin occurring in the day(s) preceding the arrival of one's paycheck? A daily study that captured experiences and fluctuations in individual attitudes and behavior in the day(s) immediately preceding and following payday could shed additional light on whether payday effects may be somewhat anticipatory in nature, rather than concentrated on a

single day. Further, measuring anticipation explicitly could better address the mechanism by which these anticipatory effects actually influence and employee's experience of payday.

This question underscores continuous calls by scholars to more explicitly incorporate time and the role of temporality into theory (George & Jones, 2000; Mitchell & James, 2001; Shipp & Fried, 2014). Theory has generally not considered how compensation variables, and payday in particular, behave temporally, including the expected timing of effects, the duration of effects, and the expected fade-outs or rates of change in attitudes and behaviors in relation to pay. This research is sorely needed in terms of not only payday, but also other timing of money and benefit effects, such as bonuses, or merit raises. Without such theory, scholars may “miss” key effects without properly understanding the temporal context in which they occur. It is imperative that scholars continue to work to explicitly consider and directly theorize about the role of time in compensation, including, but not limited to, the phenomenon of payday.

In this dissertation, payday was considered as a temporal landmark of a dichotomous nature. That is, paydays were coded “1” or “0”; either it was payday, or it was not payday. And yet, while this is an important consideration of payday as an event and temporal landmark, recent theory about events suggests alternative options for the conceptualization of payday as an event. Specifically, Event System Theory (EST; Morgeson, Mitchell, & Liu, 2015) supports the broader, critical role of events in the workplace, and also suggests an alternative framework for evaluating events. This theory suggests that events can be conceptualized in a manner beyond its dichotomous nature, and instead can capture the extent to which the event is perceived as impactful by

employees. By examining the extent to which an event is critical, disruptive, and novel, researchers may be better able to understand the role of the event and its outcomes at different levels in the workplace (Morgeson et al., 2015). Further, this conceptualization allows for scholars to examine events in a continuous manner, rather than creating a dichotomy, which may allow for a more nuanced understanding of how the event is experienced in the workplace. Thus, future research on payday may better conceptualize this important event but considering it more subjectively in terms of its criticality, novelty, and disruptiveness in line with EST.

Finally, in this study I sought to establish direct and indirect effects of paydays on individuals. While this represents a critical initial step in understanding this largely-neglected phenomenon, the robust literature on money indicates that there may be meaningful and important individual differences that influence how individuals think about, plan with, and consider money (Furnham, 2014; Mitchell & Mickel, 1999). These individual differences can include financial variables (e.g., feelings of being cash-strapped as a household or living paycheck-to-paycheck) as well as general perceptions of money and the role of money in one's life (e.g., perceptions of money as evil, as a symbol of achievement, as a sense of security; Furnham, 2014; Tang, 1993). Thus, future research could examine the role of these individual differences both in conjunction with the money priming literature (which has heretofore largely focused on between-group experimental designs) and in future research on compensation.

Although this dissertation in particular found mixed evidence for the role that the payday phenomenon plays in everyday organizational life, it nonetheless represented an important theoretical unification of two largely otherwise disparate literatures. Currently,

research on compensation and the literature on the psychology of money remain mostly disconnected. This disconnect is unfortunate and is ripe for future investigation for scholars in both disciplines to better untangle how compensation in the workplace influences individuals of different financial backgrounds, and with different feelings about the role of money in work and life. Additionally, researchers considering the psychology of money could extend existing research by contextualizing studies to the work context and the employer-employee pay relationship in particular.

### **5.5. Conclusion**

Making an income is one of the primary reasons why individuals seek to secure and maintain employment (Bloom & Milkovich, 1998; Leana & Meuris, 2015). Despite the criticality of pay for individuals both inside and outside of their organizational life, organizational research has not adequately addressed this phenomenon in totality, and particularly neglects the pay-related event of payday. This dissertation provides initial evidence that payday may act as a temporal landmark, supporting existing findings outside of organizational behavior regarding the meaningful effects of the receipt of money on individual attitudes, cognitions, and behaviors. However, the specific workplace related attitudes and behaviors affected by the arrival of this landmark and the mechanism by which these effects occur remains unknown. Future research is needed to untangle how, when, and for how long payday impacts individuals in the workplace.

## APPENDIX A

### Words for Study 1 Searches (in Swedish)

1. Payday
  - a. Lönedag – “Payday”
2. Stress
  - a. Ångest – “Anxiety”
  - b. Meditation (Same translation)
  - c. Antidepressiva läkemedel – “Antidepressants”
3. Self-efficacy
  - a. Självhjälp – “Self-help”
  - b. Six Sigma (Same translation)
4. Personal control
  - a. LCHF – “Low carb, high fat” (a popular diet in Sweden)
  - b. Diet (Same translation)
5. Recovery
  - a. Mysa – “Chilling out”
  - b. Vandringsleder - “Hiking trails”
  - c. Netflix (same translation)
  - d. Roliga aktiviteter – “Fun activities”
  - e. Smörgåsbord – Swedish buffet meal
6. Helping behaviors
  - a. Volontärarbete – “Volunteer work”

## APPENDIX B

### Items used in Study 2 Scales

Items denoted with (R) were reverse-coded.

Sense of Personal Control (adapted from Ryff, 1989)

1. Today, I feel that I can manage the responsibilities of my daily life.
2. Today, I feel that I can do a good job taking care of my personal affairs.<sup>7</sup>
3. Today, I feel that I can juggle my time so that I can fit everything in that needs to be done.
4. Today, I feel that I can build a lifestyle for myself that is much to my liking.
5. Today, I feel that I do not fit very well with the people and community around me. (R)
6. Today, I feel overwhelmed by my responsibilities (R)
7. Today, I feel difficulty arranging my life in a way that is satisfying to me (R)

Job self-efficacy (adapted from Riggs & Knight, 1994)

1. Today, I have confidence in my ability to do my job.
2. Today, there are some tasks required by my job that I cannot do well. (R)
3. Today, if my performance was poor, it was due to my lack of ability. (R)
4. Today, I doubt my ability to do my job. (R)
5. Today, I have all the skills needed to perform my job very well.
6. Today, I feel that most people in my line of work can do this job better than I can. (R)
7. Today, I feel that I am an expert at my job.
8. Today, I feel that my future in this job is limited because of my lack of skills. (R)
9. Today, I am very proud of my job, skills, and abilities.
10. Today, I feel threatened when others watch me work. (R)

Stress (from Caplan, Cobb, French, Van Harrison, and Pinneau, 1980).

1. I feel nervous
2. I feel jittery
3. I feel calm (R)
4. I feel fidgety

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<sup>7</sup> This item was adapted to remove reference to personal finances. The original wording stated ...”taking care of my personal finances and affairs.” This was altered to avoid potential confounding effects due to the receipt of money that occurs on payday.

OCB-I (from Dalal et al., 2009)

Today I:

1. Went out of my way to be nice to my supervisor or a coworker.
2. Tried to help my supervisor or a coworker.
3. Defended my supervisor or a coworker's opinion or suggestion.
4. Went out of my way to include my supervisor or a coworker in a conversation.
5. Tried to be available to my supervisor or a coworker.
6. Spoke highly about my supervisor or a coworker to others.

OCB-O (from Dalal et al, 2009)

Today I:

1. Volunteered for additional work tasks.
2. Went above and beyond what was required for the work task.
3. Defended organizational politics.
4. Chose to work rather than take a break.
5. Persisted enthusiastically in completing a task.
6. Spoke highly about my organization to others.

Recovery Experiences (from Sonnentag & Fritz, 2007)

1. I forgot about work.
2. I didn't think about work at all.
3. I distanced myself from work.
4. I got a break from the demands of work.
5. I kicked back and relaxed.
6. I did relaxing things.
7. I used the time to relax.
8. I took time for leisure.
9. I learned new things.
10. I sought out intellectual challenges.
11. I did things that challenged me.
12. I did something to broaden my horizons.
13. I felt like I can decide for myself what to do.
14. I decided my own schedule.
15. I determined for myself how I would spend my time.
16. I took care of things the way that I wanted them done.

Positive Affect (from Thompson, 2007)

1. Alert
2. Inspired
3. Determined
4. Attentive
5. Active

Nostalgia (Marker Variable; from Wildschut, Sedikides, Ardnt, and Routledge, 2006)

1. Right now, I am feeling quite nostalgic.
2. Right now, I am having nostalgic thoughts.
3. I feel nostalgic at the moment.

## REFERENCES

- American Psychological Association (2016). *Stress in America: The impact of discrimination*. Stress in America Survey.
- American Psychological Association (n.d.). Stress in the workplace. Retrieved 15 March 2017 from: <http://www.apa.org/helpcenter/workplace-stress.aspx>
- Andersson, E., Lundborg, P., & Vikström, J. (2015). Income receipt and mortality—Evidence from Swedish public sector employees. *Journal of Public Economics*, 131, 21-32.
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22, 309-328.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37, 122-147.
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50(2), 248-287.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman & Company.
- Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, 1, 164-180.
- Bandura, A. (2000). Cultivate self-efficacy for personal and organizational effectiveness. In E. A. Locke (Ed.), *The Blackwell handbook of principles of organizational behavior* (pp. 120–136). Oxford, UK: Blackwell.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173 – 1182.
- Bennett, A. A., Bakker, A. B., & Field, J. G. (2017). Recovery from work-related effort: A meta-analysis. *Journal of Organizational Behavior*, 39, 262-275.
- Bergeron, D. M. (2007). The potential paradox of organizational citizenship behavior: Good citizens at what cost?. *Academy of Management Review*, 32, 1078-1095.
- Bergeron, D. M., Shipp, A. J., Rosen, B., & Furst, S. A. (2013). Organizational citizenship behavior and career outcomes: The cost of being a good citizen. *Journal of Management*, 39, 958-984.

- Bernheim, B. D., Ray, D., & Yeltekin, Ş. (2015). Poverty and Self-Control. *Econometrica*, *83*, 1877-1911.
- Beus, J. M., & Whitman, D. S. (2017). Almighty dollar or root of all evil? Testing the effects of money on workplace behavior. *Journal of Management*, *43*, 7: 2147-2167.
- Bloom, M., & Michel, J. G. (2002). The relationships among organizational context, pay dispersion, and among managerial turnover. *Academy of Management Journal*, *45*, 33-42.
- Bloom, M., and Milkovich, G. (1996). Issues in managerial compensation. In C. L. Cooper & D. M., Rousseau (Eds.) *Trends in Organizational Behavior*; vol. 3, Wiley: Chichester 23-48.
- Bosco, F. A., Aguinis, H., Singh, K., Field, J. G., & Pierce, C. A. (2015). Correlational effect size benchmarks. *Journal of Applied Psychology*, *100*, 431-449.
- Bosson, J. K., Prewitt-Freilino, J. L., & Taylor, J. N. (2005). Role rigidity: A problem of identity misclassification?. *Journal of Personality and Social Psychology*, *89*, 552-565.
- Boucher, H. C., & Kofos, M. N. (2012). The idea of money counteracts ego depletion effects. *Journal of Experimental Social Psychology*, *48*, 804-810.
- Bowler, W. M., & Brass, D. J. (2006). Relational correlates of interpersonal citizenship behavior: a social network perspective. *Journal of Applied Psychology*, *91*, 70-82.
- Bureau of Economic Analysis (2014). Chapter 10: Compensation of employees. In *Concepts and Methods of the U.S. National Income And Product Accounts*. Retrieved from <https://www.bea.gov/national/pdf/chapter10.pdf>
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural psychology*, *1*(3), 185-216.
- Burgess, M. (2014). How frequently do private businesses pay workers? *Beyond the Numbers: Pay & Benefits (U.S. Bureau of Labor Statistics)*, 3. Retrieved from <https://www.bls.gov/opub/btn/volume-3/how-frequently-do-private-businesses-pay-workers.htm>
- Caplan, R. D., Cobb, S., French, J. R., Van Harrison, R., & Pinneau, S. R. (1980). Job Demands and Worker Health: Main Effects and Occupational Differences (Survey Research Center, Institute for Social Research, Ann Arbor, MI). *Ann Arbor, MI: The University of Michigan*.

- Cerasoli, C. P., Nicklin, J. M., & Ford, M. T. (2014). Intrinsic motivation and extrinsic incentives jointly predict performance: A 40-year meta-analysis. *Psychological Bulletin, 140*, 980-1008.
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4*, 62-83.
- Christie, A. M., & Barling, J. (2009). Disentangling the indirect links between socioeconomic status and health: The dynamic roles of work stressors and personal control. *Journal of Applied Psychology, 94*, 1466-1478.
- Compensate [Def. 2]. (n.d.). *In Merriam Webster Online*, Retrieved June 27, 2017 from <https://www.merriam-webster.com/dictionary/compensate>.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. Routledge.
- Currall, S. C., Towler, A. J., Judge, T. A., & Kohn, L. (2005). Pay satisfaction and organizational outcomes. *Personnel Psychology, 58*, 613-640.
- Dai, H., Milkman, K. L., & Riis, J. (2014). The fresh start effect: Temporal landmarks motivate aspirational behavior. *Management Science, 60*, 2563-2582.
- Dalai, R. S., Lam, H., Weiss, H. M., Welch, E. R., & Hulin, C. L. (2009). A within-person approach to work behavior and performance: Concurrent and lagged citizenship-counterproductivity associations, and dynamic relationships with affect and overall job performance. *Academy of Management Journal, 52*, 1051-1066.
- Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53*, 1024-1037.
- Demerouti, E., Bakker, A. B., Geurts, S. A. E., & Taris, T. W. (2009). Daily recovery from work-related effort during non-work time. In S. Sonnentag, P. L. Perrewé, & D. C. Ganster (Eds.), *Current perspectives on job-stress recovery: Research in occupational stress and well being* (Vol. 7, pp. 85-123). Bingley, United Kingdom: JAI Press.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*, 499-512.
- DeVoe, S. E., & Pfeffer, J. (2007a). Hourly payment and volunteering: The effect of organizational practices on decisions about time use. *Academy of Management Journal, 50*, 783-798.

- DeVoe, S. E., & Pfeffer, J. (2007b). When time is money: The effect of hourly payment on the evaluation of time. *Organizational Behavior and Human Decision Processes*, 104, 1-13.
- DeVoe, S. E., & Pfeffer, J. (2009). When is happiness about how much you earn? The effect of hourly payment on the money—happiness connection. *Personality and Social Psychology Bulletin*, 35, 1602-1618.
- DeVoe, S. E., Pfeffer, J., & Lee, B. Y. (2013). When does money make money more important? Survey and experimental evidence. *Industrial and Labor Relations Review*, 5, 1076-1094.
- Dewitte, S. (2006). Money and the autonomy instinct. *Behavioral and Brain Sciences*, 29(02), 184-185.
- Diehl, M., & Hay, E. L. (2010). Risk and resilience factors in coping with daily stress in adulthood: the role of age, self-concept incoherence, and personal control. *Developmental Psychology*, 46(5), 1132-1146.
- Dulebohn, J. H., & Werling, S. E. (2007). Compensation research past, present, and future. *Human Resource Management Review*, 17, 191-207.
- Dobkin, C., & Puller, S. L. (2007). The effects of government transfers on monthly cycles in drug abuse, hospitalization and mortality. *Journal of Public Economics*, 91, 2137-2157.
- Eisenberger, R., Huntington, R., Hutchinson, S., and Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71, 500-507.
- Evans, W. N., & Moore, T. J. (2011). The short-term mortality consequences of income receipt. *Journal of Public Economics*, 95, 1410-1424.
- Fang, M., & Gerhart, B. (2012). Does pay for performance diminish intrinsic interest?. *The International Journal of Human Resource Management*, 23, 1176-1196.
- Folkman S. (2013) Stress: Appraisal and Coping. In: Gellman M.D., Turner J.R. (eds) *Encyclopedia of Behavioral Medicine*. Springer, New York, NY
- Furnham, A. (2014). *The new psychology of money*. New York, New York: Routledge.
- Furnham, A., Wilson, E., & Telford, K. (2012). The meaning of money: The validation of a short money-types measure. *Personality and Individual Differences*, 52, 707-711.

- Gasiorowska, A., Chaplin, L. N., Zaleskiewicz, T., Wygrab, S., & Vohs, K. D. (2016). Money cues increase agency and decrease prosociality among children: early signs of market-mode behaviors. *Psychological Science, 27*, 331-344.
- George, J. M., & Jones, G. R. (2000). The role of time in theory and theory building. *Journal of Management, 26*, 657-684.
- Gerhart, B., & Rynes, S. (2003). *Compensation: Theory, evidence, and strategic implications*. Thousand Oaks, CA: Sage.
- Gerhart B., & Milkovich G. T. (1990). Organizational differences in managerial compensation and financial performance. *Academy of Management Journal, 8*, 663-691.
- Gerhart B., & Milkovich G. T. (1992). Employee compensation: Research and practice. In Dunnette MD, Hough LM (Eds.), *Handbook of industrial and organizational psychology* (2nd ed.. Vol. 3, pp. 481-569). Palo Alto, CA: Consulting Psychologists Press
- Gerhart, B., Milkovich, G. T., & Murray, B. (1992). Pay, performance, and participation (CAHRS Working Paper #92-28). Ithaca, NY: Cornell University, School of Industrial and Labor Relations, Center for Advanced Human Resource Studies. <http://digitalcommons.ilr.cornell.edu/cahrswp/314>
- Gibson, K. (2016). Who lives paycheck-to-paycheck? You might be surprised. *CBS News Moneywatch*. Retrieved from <http://www.cbsnews.com/news/who-lives-paycheck-to-paycheck-you-might-be-surprised/>
- Gino, F., & Mogilner, C. (2014). Time, money, and morality. *Psychological Science, 25*, 414-421.
- Greenberger, D. B., & Strasser, S. (1986). Development and application of a model of personal control in organizations. *Academy of Management Review, 11*(1), 164-177.
- Gupta, N., & Shaw, J. D. (1998). Let the evidence speak: financial incentives are effective! *Compensation & Benefits Review, 30*, 26-32.
- Gupta, N., & Shaw, J. D. (2014). Employee compensation: The neglected area of HRM research. *Human Resource Management Review, 24*, 1-4.
- Hahn, V. C., Binnewies, C., & Haun, S. (2012). The role of partners for employees' recovery during the weekend. *Journal of Vocational Behavior, 80*, 288-298.
- Hearings before the House Financial Services Subcommittee on Financial Institutions and Consumer Credit (2016). (Testimony of W. Dennis Shaul). Retrieved from:

<http://financialservices.house.gov/uploadedfiles/hhrg-114-ba15-wstate-dshaul-20160211.pdf>

- Heggestad, E. D., & Kanfer, R. (2005). The predictive validity of self-efficacy in training performance: Little more than past performance. *Journal of Experimental Psychology: Applied*, 11, 84-97.
- Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The Motivation to Work* (2<sup>nd</sup> ed.). New York, NY: John Wiley & Sons.
- Hui, C., Lee, C., & Rousseau, D. M. (2004). Psychological contract and organizational citizenship behavior in China: Investigating generalizability and instrumentality. *Journal of Applied Psychology*, 89, 311-321.
- Jacobe, D., & Jones, J. M. (2009). Consumers spend more on weekends, payday weeks. In *Gallup Daily Tracking*. Retrieved from <http://www.gallup.com/poll/123839/consumers-spend-more-weekends-payday-weeks.aspx>.
- Jenkins Jr, G. D., Mitra, A., Gupta, N., & Shaw, J. D. (1998). Are financial incentives related to performance? A meta-analytic review of empirical research. *Journal of Applied Psychology*, 83: 777-787.
- Jiang, Y., Chen, Z., & Wyer, R. S. (2014). Impact of money on emotional expression. *Journal of Experimental Social Psychology*, 55, 228-233.
- Judge, T. A., Jackson, C. L., Shaw, J. C., Scott, B. A., & Rich, B. L. (2007). Self-efficacy and work-related performance: the integral role of individual differences. *Journal of Applied Psychology*, 92, 107-127.
- Judge, T. A., Piccolo, R. F., Podsakoff, N. P., Shaw, J. C., & Rich, B. L. (2010). The relationship between pay and job satisfaction: A meta-analysis of the literature. *Journal of Vocational Behavior*, 77, 157-167.
- Judge, T. A., Simon, L. S., Hurst, C., & Kelley, K. (2014). What I experienced yesterday is who I am today: Relationship of work motivations and behaviors to within-individual variation in the five-factor model of personality. *Journal of Applied Psychology*, 99, 199-221.
- Karasek Jr, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24, 285-308.
- Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: empowerment and dependency. *Journal of Applied Psychology*, 88, 246-255.

- Katz, D. (1964). The motivational basis of organizational behavior. *Behavioral Science*, 9, 131-146.
- Kouchaki, M., Smith-Crowe, K., Brief, A. P., & Sousa, C. (2013). Seeing green: Mere exposure to money triggers a business decision frame and unethical outcomes. *Organizational Behavior and Human Decision Processes*, 121, 53-61.
- Lea, S. E., & Webley, P. (2006). Money as tool, money as drug: The biological psychology of a strong incentive. *Behavioral and Brain Sciences*, 29, 161-209.
- Leana, C. R., & Meuris, J. (2015). Living to work and working to live: Income as a driver of organizational behavior. *The Academy of Management Annals*, 9(1), 55-95.
- LePine, J. A., Erez, A., & Johnson, D. E. (2002). The nature and dimensionality of organizational citizenship behavior: a critical review and meta-analysis. *Journal of Applied Psychology*, 87, 52-65.
- Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86(1), 114-121.
- Liu, D., & Fu, P. P. (2011). Motivating proteges' personal learning in teams: a multilevel investigation of autonomy support and autonomy orientation. *Journal of Applied Psychology*, 96, 1195-1208.
- Liu, S., Wang, M., Liao, H., & Shi, J. (2014). Self-regulation during job search: The opposing effects of employment self-efficacy and job search behavior self-efficacy. *Journal of Applied Psychology*, 99, 1159-1172.
- Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013). Poverty impedes cognitive function. *Science*, 341, 976-980.
- Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, M. S. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, 43, 738-748.
- Menec, V. H., & Chipperfield, J. G. (1997). Remaining active in later life: The role of locus of control in seniors' leisure activity participation, health, and life satisfaction. *Journal of Aging and Health*, 9, 105-125.
- Menges, J. I., Tussing, D. V., Wihler, A., & Grant, A. (2016). When job performance is all relative: How family motivation energizes effort and compensates for intrinsic motivation. *Academy of Management Journal*, Published ahead of print. doi: 10.5465/amj.2014.0898
- Milkovich, G. T., & Newman, J. M. (1993). Compensation. Homewood, IL: Irwin.

- Mitchell, T. R., & Mickel, A. E. (1999). The meaning of money: An individual-difference perspective. *Academy of Management Review*, 24, 568-578.
- Mitchell, T. R. & James, L. R. (2001). Building better theory: Time and the specifications of when things happen. *Academy of Management Review*, 26, 530-547.
- Mishra, H., Mishra, A., & Nayakankuppam, D. (2010). How salary receipt affects consumers' regulatory motivations and product preferences. *Journal of Marketing*, 74, 93-103.
- Mittal, C., & Griskevicius, V. (2014). Sense of control under uncertainty depends on people's childhood environment: A life history theory approach. *Journal of Personality and Social Psychology*, 107, 621-637.
- Mogilner, C. (2010). The pursuit of happiness: Time, money, and social connection. *Psychological Science*, 21, 1348-1354.
- Molinsky, A. L., Grant, A. M., & Margolis, J. D. (2012). The bedside manner of homo economicus: How and why priming an economic schema reduces compassion. *Organizational Behavior and Human Decision Processes*, 119, 27-37.
- Morgeson, F. P., Mitchell, T. R., & Liu, D. (2015). Event system theory: An event-oriented approach to the organizational sciences. *Academy of Management Review*, 40, 515-537.
- Newman, D. B., Tay, L., & Diener, E. (2014). Leisure and subjective well-being: A model of psychological mechanisms as mediating factors. *Journal of Happiness Studies*, 15, 555-578.
- OECD (2018). Income inequality (indicator). doi: 10.1787/459aa7f1-en (Accessed on 14 April 2018)
- Olafsson, A. and Pagel, M. (2016). *The Liquid Hand-to-Mouth: Evidence from Personal Finance Management Software*. Working Paper. Retrieved from: <https://www.gsb.stanford.edu/sites/gsb/files/paydayliquidity.pdf>
- Old Time Candy Company (n.d.). *Pay Day Candy Bar History*. Retrieved 15 March 2017 from <https://www.oldtimecandy.com/walk-the-candy-aisle/payday/>
- Organ, D. W. (1997). Organizational citizenship behavior: It's construct clean-up time. *Human Performance*, 10, 85-97.
- Osborn, C. (1898). Economic aspects of the liquor problem. *The Economic Journal*, 8, 572-577.

- Pagliery, J. (2016). How would you like to get a paycheck every single day? *CNNMoney*. Retrieved from: <http://q13fox.com/2016/02/10/how-would-you-like-to-get-a-paycheck-every-single-day/>
- Park, Y., & Fritz, C. (2015). Spousal recovery support, recovery experiences, and life satisfaction crossover among dual-earner couples. *Journal of Applied Psychology, 100*, 557-566.
- Parsons, C. A., & Van Wesep, E. D. (2013). The timing of pay. *Journal of Financial Economics, 109*, 373-397.
- Peetz, J., & Wilson, A. E. (2013). The post-birthday world: Consequences of temporal landmarks for temporal self-appraisal and motivation. *Journal of Personality and Social Psychology, 104*, 249-266.
- Peetz, J., & Wilson, A. E. (2014). Marking time: Selective use of temporal landmarks as barriers between current and future selves. *Personality and Social Psychology Bulletin, 40*, 44-56.
- Pfeffer, J., & DeVoe, S. E. (2009). Economic evaluation: The effect of money and economics on attitudes about volunteering. *Journal of Economic Psychology, 30*, 500-508.
- Price, R. H., Choi, J. N., & Vinokur, A. D. (2002). Links in the chain of adversity following job loss: How financial strain and loss of personal control lead to depression, impaired functioning, and poor health. *Journal of Occupational Health Psychology, 7*, 302-312.
- Public Holidays Global (2018, April 12). *Sweden Public Holidays 2018*. Retrieved from: <https://publicholidays.se/2018-dates/>
- Rajagopal, P., & Rha, J. Y. (2009). The mental accounting of time. *Journal of Economic Psychology, 30*, 772-781.
- Richardson, H. A., Simmering, M. J., & Sturman, M. C. (2009). A tale of three perspectives: Examining post hoc statistical techniques for detection and correction of common method variance. *Organizational Research Methods, 12*(4), 762-800.
- Riggs, M. L., & Knight, P. A. (1994). The impact of perceived group success-failure on motivational beliefs and attitudes: a causal model. *Journal of Applied Psychology, 79*, 755-766.
- Robinson, S. L., & Morrison, E. W. (1995). Psychological contracts and OCB: The effect of unfulfilled obligations on civic virtue behavior. *Journal of Organizational Behavior, 16*, 289-298.

- Rose, G. M., & Orr, L. M. (2007). Measuring and exploring symbolic money meanings. *Psychology & Marketing, 24*, 743-761.
- Ross, C. E., & Mirowsky, J. (1989). Explaining the social patterns of depression: Control and problem solving – or support and talking?. *Journal of Health and Social Behavior, 30*, 206-219.
- Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee responsibilities and Rights Journal, 2*, 121-139.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*, 54-67.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*, 1069 - 1081.
- Savani, K., Mead, N. L., Stillman, T., & Vohs, K. D. (2016). No match for money: Even in intimate relationships and collectivistic cultures, reminders of money weaken sociomoral responses. *Self and Identity, 15*, 342-355.
- Sehgal, K. (2015). What happens to your brain when you negotiate about money. *Harvard Business Review*. Retrieved from <https://hbr.org/2015/10/what-happens-to-your-brain-when-you-negotiate-about-money>
- Shapiro, J. M. (2005). Is there a daily discount rate? Evidence from the food stamp nutrition cycle. *Journal of Public Economics, 89*, 303-325.
- Shaw, J. D., Duffy, M. K., Mitra, A., Lockhart, D. E., & Bowler, M. (2003). Reactions to merit pay increases: A longitudinal test of a signal sensitivity perspective. *Journal of Applied Psychology, 88*, 538-544.
- Shaw, J. D., & Gupta, N. (2015). Let the evidence speak again! Financial incentives are more effective than we thought. *Human Resource Management Journal, 25*, 281-293.
- Shaw, J. D., Gupta, N., & Delery, J. E. (2002). Pay dispersion and workforce performance: Moderating effects of incentives and interdependence. *Strategic Management Journal, 23*, 491-512.
- Shipp, A., Fried, Y. (2014). *Time and Work, Volume 1*. London: Psychology Press.
- Sianoja, M., Syrek, C., de Bloom, J., Korpela, K., & Kinnunen, U. (2017). Enhancing daily well-being at work through lunchtime park walks and relaxation exercises: Recovery Experiences as mediators. *Journal of Occupational Health Psychology*. Online first publication. doi: 10.1037/ocp0000083

- Sonnentag, S. (2001). Work, recovery activities, and individual well-being: a diary study. *Journal of Occupational Health Psychology, 6*(3), 196-210.
- Sonnentag, S., Binnewies, C., & Mojza, E. J. (2010). Staying well and engaged when demands are high: the role of psychological detachment. *Journal of Applied Psychology, 95*, 965-976.
- Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology, 12*, 204-221.
- Sonnentag, S., & Fritz, C. (2015). Recovery from job stress: The stressor-detachment model as an integrative framework. *Journal of Organizational Behavior, 36*, S72-S103.
- Spiller, S. A. (2011). Opportunity cost consideration. *Journal of Consumer Research, 38*, 595-610.
- Spiller, S. A. (2012). Feeling rich on payday. *Psychology Today*. Retrieved from <https://www.psychologytoday.com/us/blog/costly-choices/201209/feeling-rich-payday>
- Stephens, M. (2006). Paycheque receipt and the timing of consumption. *The Economic Journal, 116*, 680-701.
- Stephens-Davidowitz, Seth. (2017). *Everybody lies: Big data, new data, and what the internet can tell us about who we really are*. New York, NY: HarperCollins.
- Stephens-Davidowitz, S., & Varian, H. (2015). A hands-on guide to Google data. Retrieved from: <http://people.ischool.berkeley.edu/~hal/Papers/2015/primer.pdf>
- Suvorov, A., & Van de Ven, J. (2009). Discretionary rewards as a feedback mechanism. *Games and Economic Behavior, 67*(2), 665-681.
- Tang, T. L. P. (1993). The meaning of money: Extension and exploration of the money ethic scale in a sample of university students in Taiwan. *Journal of Organizational Behavior, 14*, 93-99.
- Teng, F., Chen, Z., Poon, K-T., Zhang, D., Jiang, Y. (2016). Money and relationships: When and why thinking about money leads people to approach others. *Organizational Behavior and Human Decision Processes, 137*, 58-70.
- Thompson, E. R. (2007). Development and validation of an internationally reliable short-form of the positive and negative affect schedule (PANAS). *Journal of Cross-Cultural Psychology, 38*(2), 227-242.

- Tosi Jr, H. L., & Gomez-Mejia, L. R. (1989). The decoupling of CEO pay and performance: An agency theory perspective. *Administrative Science Quarterly*, 34, 169-189.
- Unionen. (2017). *Utbetalningsdag för lön (Distribution of Salary)*. Retrieved from <https://www.unionen.se/rad-och-stod/utbetalningsdag-lon>
- U.S. Department of Labor (2017). *State Payday Requirements*. Retrieved from <https://www.dol.gov/whd/state/payday.htm>
- U.S. Department of Labor (n.d.). *Summary of the major laws of the Department of Labor*. Retrieved 13 April, 2017 from <https://www.dol.gov/general/aboutdol/majorlaws>
- Vohs, K. D. (2015). Money priming can change people's thoughts, feelings, motivations, and behaviors: An update on 10 years of experiments. *Journal of Experimental Psychology: General*, 144, e86 – e93.
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science*, 314, 1154-1156.
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2008). Merely activating the concept of money changes personal and interpersonal behavior. *Current Directions in Psychological Science*, 17, 208-212.
- Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 85(1), 132-142.
- Whetten, D. A. (1989). What constitutes a theoretical contribution?. *Academy of Management Review*, 14, 490-495.
- White, Gillian. (16 May, 2017) Getting to the bottom of American's fascination with wealth. *The Atlantic*. Retrieved from: <https://www.theatlantic.com/business/archive/2017/05/greenfield-generation-wealth/526683/>
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17, 601-617.
- Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: content, triggers, functions. *Journal of Personality and Social Psychology*, 91(5), 975-993.
- Wood, R., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of Management Review*, 14, 361-384.

Zaleskiewicz, T., Gasiorowska, A., Kesebir, P., Luszczynska, A., & Pyszczynski, T. (2013). Money and the fear of death: The symbolic power of money as an existential anxiety buffer. *Journal of Economic Psychology*, *36*, 55-67.

Zerubavel, E. (1981). *Hidden rhythms. Schedules and calendars in social life*. Chicago, IL: University of Chicago Press.

Zhou, X., Vohs, K. D., & Baumeister, R. F. (2009). The symbolic power of money: Reminders of money alter social distress and physical pain. *Psychological Science*, *20*, 700-706.

**FIGURE 1**

**THEORETICAL MODEL**

