The Effect of Financial Scarcity and an Individuals' Power on Temporal Discounting, Cognition and Exploitative Behavior during the COVID-19 Pandemic

Daniela Rivera

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Professor Filipa de Almeida

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Glossary

a The probability of making Type I error; Cronbach's index of reliability

b Estimated value of unstandardized regression coefficient

ANOVA Analysis of Variance

CI Confidence Interval

df Degrees of freedom

DV Dependent Variable

F F distribution, fishers F ratio

IV Independent Variable

M Sample mean

MD Mean Difference

n Number of cases per condition

N Total number of cases

p p-value

r Estimation of the Spearman correlation coefficient

R2 Multiple correlation squared; measure of strength of association

RQ Research Question

SD Standard Deviation

SE Standard Error

Abstract Title: The Effect of Financial Scarcity and an Individuals' Power on Temporal Discounting, Cognition and Exploitative Behavior during the COVID-19 Pandemic

Author: Daniela Rivera

Financial scarcity impacted many people's lives during the pandemic. The uncertainty that the pandemic wrought manifested itself in different ways for individuals of varying power levels. One of the reasons why financial scarcity was so impactful was because nobody saw it coming. The pandemic saw a turnover of many jobs and a change in people's futures. As a result, financial scarcity became rampant around the world, shaping individual mindset towards temporal discounting. This dissertation intends to study the financial effects of scarcity on cognition and behavior of people with varying levels of power. I propose that individuals with higher power experienced less financial scarcity as a result of high cognitive functions, which decreased the likelihood of temporal discounting in comparison to their individual counterparts with lower power. In order to test for this, I collected data, using an experiment. The results did not support the hypotheses. More research into this subject is needed before we can make an adequate conclusion.

Título do resumo: O efeito da escassez financeira e do poder dos indivíduos no desconto temporal, cognição e comportamento exploratório durante a pandemia de COVID-19

Autor: Daniela Rivera

A escassez financeira afetou a vida de muitas pessoas durante a pandemia. A incerteza que a pandemia causou se manifestou de maneiras diferentes para indivíduos de vários níveis de poder. Uma das razões pelas quais a escassez financeira teve tanto impacto foi porque ninguém a previu. A pandemia causou a rotatividade de muitos empregos e uma mudança no futuro das pessoas. Como resultado, a escassez financeira tornou-se galopante em todo o mundo, moldando a mentalidade individual em relação ao desconto temporal. Esta dissertação pretende estudar os efeitos financeiros da escassez sobre a cognição e o comportamento de pessoas com diferentes níveis de poder. Proponho que os indivíduos com maior poder sofreram menos os efeitos da escassez financeira como resultado de funções cognitivas superiores, o que diminuiu a probabilidade de desconto temporal em comparação com indivíduos com menos poder. Para testar isso, eu recolhi dados, com recurso a uma experiencia. Os resultados não apoiaram as hipóteses. É necessária mais investigação sobre este assunto.

“Nothing is more difficult and therefore more precious, than to be able to decide.”

Napoleon Bonoparte

The idea of choice is believed to be what separates humans from other species. It’s this idea that makes us unique. No matter what environment we find ourselves in, we make decisions in order to fulfill our goals, dreams and pursuits. However, have we ever considered how outside factors may influence our decision making?

At the beginning of 2020, the world was faced with an unprecedented COVID-19 pandemic. Since the pandemic began, there have been over a million deaths worldwide. A pandemic on this scale has not been seen since the Spanish Flu almost a century ago. With it, came a lot of change to people’s lives. Not only personally to those who may have lost family or friends, but also to their livelihood. Since the lockdown began based on a BBC News report released on September 15, it was reported that between the months of March and August they were over 2 million people laid off from work that had to claim unemployment benefits (King, 2020). As a result of this economies around the world tanked and many countries have suffered this pandemic’s financial effects.

COVID-19 is only the most recent example where decision making was influenced by external factors. Specifically, COVID-19 has had an effect on individuals’ financial opportunities as with the decrease of consumer activity, the bottom line for many companies has been affected. As a result, job layoffs and financial scarcity have become common. The impact of financial scarcity on organizational decision making can be seen throughout the different sectors. By exploring the effect of financial scarcity on people’ cognitive and behavioral choices it can help to better address this growing issue.

Another important concept to measure when looking at decision making under scarcity are the ramifications of power as individuals with different power levels may look at decisions under financial scarcity differently. In Keltner, Gruenfeld, and Anderson (2003) it is stated that people who have different power levels will perceive the world and behave differently. According to this framework, feeling high power, leads to the activation of the Behavioral Approach System (BAS) where individuals are goal oriented, unconstrained by other's opinions and forward thinkers. Meanwhile low power leads to the activation of the Behavioral Inhibition System (BIS) where individuals are not goal oriented, care more for the evaluation of others and, more importantly, are more vigilant, and sensitive to threats instead of rewards (Keltner, 2003). Understanding different individual's power positions may help us better understand how different individuals react under different circumstances.

1.1 Problem Statement

Thus, in this paper we intend to examine how individual decision- making changes as a result of financial scarcity given their different sense of power. By investigating the relationship between financial scarcity and decision making, given different power levels, I hope to answer the main question of the thesis: ""How does one's sense of power interact with scarcity perceptions to predict decision making and behavior?" This thesis will also examine the following sub-questions:

RQ1: Does scarcity's effect on temporal discounting depend on one's sense of power?

RQ2: Are high powered people more likely to exploit low others under conditions of financial scarcity?

1.2 Relevance

This thesis contributes to the existing literature regarding this subject by combining financial scarcity and decision making and carefully examining how these two variables interact when different levels of power are being examined. Based on the results, I hope that the conclusions drawn from my research will be beneficial in providing solutions. Because this is such a prevalent issue in society today, it can bring awareness to the workplace and help managers improve relations with people of different power levels. Previous research has not crossed financial scarcity with power and applying a pandemic situation is also new. This thesis will add a more detailed examination of how financial scarcity, specifically, can have an effect on different people's decisions based on their power experience.

1.3 Structure

In order to investigate the research questions an experimental study was conducted. The following chapter will feature a literature review of previous research on the topic in order to develop the hypotheses for the study. The third chapter will explain the methodology and experiment design in order to test these hypotheses. The fourth chapter will examine the data and present the results. The final chapter will present conclusions, limitations, and recommendations for future research based on the findings from the data.

2. Literature Review

2.1 Power & Scarcity

The word power is derived from the Latin word “potere” which means to be able (Guinote, 2017). Over the years there have been many definitions for what the word power means; however, many theorists have concluded that power is a relational concept that is dependent on people’s perceptions of their level of control in comparison to others (Guinote, 2017). Over the years many researchers have provided theories as to how individuals utilize power. One popular theory among theorists would be the approach/inhibition theory that was theorized by Keltner, Gruenfeld and Anderson in their 2003 article. They define power “as an individual’s ability to alter other states by providing or withholding resources or administering punishments” (Keltner et. al., 2003, p. 267). Based on the approach/inhibition theory, two behavioral system based on rewards and punishments was created to ascertain where individuals fell in the power paradigm. If the individual had a high sense of power, they responded to the Behavior Activation System (BAS) which was activated where individuals were “attentive to rewards, positive emotion, automatic cognition and possessed trait driven behavior” (Keltner et. al., 2003, p. 269). On the other hand, if the individual had a low sense of power, they typically activated the Behavior Inhibition System (BIS), where individuals were “attentive to threats, negative emotion, systematic, controlled behavior and manifested situationally constrained behavior” (Keltner et. al., 2003, p.269).

As Keltner et al. (2003) mentioned above power can be a form of providing or withholding resources (Keltner et al., 2003). He also explained how groups of people can feel a stronger sense of power than others in different situations depending on the factors influencing them (Keltner, 2003). Magee’s (2010) article is a great example of the ubiquity that Keltner expresses in his article. In the wake of 9/11, power was seen as distributed between two groups of individuals: those with positional power and those with legitimate power (Magee, 2010). In the article he explains how normally individuals with legitimate power would supersede those with positional

power; however, in the case of 9/11 individuals with positional power were more sought after in order to ascertain the situation or consult on solutions as they were the first responders or first on the scene after the towers were hit. This article showed a move away from the normal response of how to deal with these situations (Magee, 2010). Campbell's et al.'s (2020) article, meanwhile, explored the idea of power through the control of resources. He explains, during the early stages of the COVID-19 pandemic, that due to the scarcity in toilet paper and other essential items, people began to stockpile and leverage their resources in order to gain some control financially in their lives (Campbell, 2020). Both Campbell and Magee examined how power can change depending on the scarcity of a situation.

Many theorists like Keltner, Magee, and Cannon have used resources as a way to conceptualize power as the "asymmetrical control over resources in social relations" (Magee et al., 2010, p. 4) or resource scarcity. Resource scarcity has shown to not only have a strong impact on individual power but also on individual's cognition and behavior. Although this study will not focus on resource scarcity as a whole, it will focus on an aspect of resource scarcity, specifically financial scarcity and its impactful role on individual's cognition and behavior. In the following section we will look at the impact that power and financial scarcity have on temporal discounting.

2.2 Power, & Scarcity on Temporal Discounting

Although not a lot of information exists between crossing financial scarcity and power, there is a lot of research regarding the influence of both power and financial scarcity on temporal discounting.

Prior research into temporal discounting has highlighted that individuals engage in temporal discounting because they feel less connected and less committed to the self they will become in the future than the self they are now (Joshi & Fast, 2013). In other words, in circumstances of temporal discounting individuals focus more on present concerns rather than the future. As a result.

temporal discounting is associated with a reduced willingness to delay gratification (Joshi & Fast, 2013). Because of this, temporal discounting is seen as a preference for short term goals instead of long-term goals (Joshi & Fast, 2013). In regards to the relationship between power and temporal discounting, it is dictated that individuals with high power tend to have a high construal level (Magee, 2010) which means that high power expands people's point of view (Trope & Liberman, 2010) making individuals with high power very future oriented. This type of individual would be less likely to fall prone to temporal discounting. On the other hand, individuals with low power tend to be the opposite. These individuals are more prone to temporal discounting. In Joshi & Fast (2013) their findings showed that those with high power showed an enhanced connection to their future self which resulted in an increased ability to look beyond the present when making decisions. The article claims that individuals who are more futuristic or at least have a direction for the future are less likely to temporally discount (Joshi & Fast, 2013).

In terms of the principle of scarcity, when a resource becomes scarce, it increases in value (Kurtz, 2008). In the relationship between financial scarcity and temporal discounting, Manning (2014) explains that there is always a conflict between immediate reward and delayed gratification. In this article he uses the example of receiving a smaller cash amount now or receiving a larger one in the future. In Manning's article he expresses that personality, behavioral economics, and brain function seemed to have an effect on the discounting choices of the individual (Manning, 2014). Specifically, in his study he found that individuals with a higher conscientiousness correlated positively with lower short-term impatience and more exponential time preferences (Manning, 2014). Meanwhile, individuals with a higher neuroticism correlated positively with a higher short-term impatience and less exponential time preferences (Manning, 2014). In other words, if two individuals from one of the two categories was to decide between accepting $8 now or $10 in the future, the individual with a higher conscientiousness would choose the $10 option whereas the individual with a higher neuroticism would choose the $8 option (Manning, 2014). Jiaying Zhao identified a relationship between financial scarcity and temporal discounting in his 2018 article. Specifically, he recognized that temporal discounting is seen as an economic behavior that can minimize the possibility of future financial gains as it may serve an individuals'

immediate gains but have a negative effect for overall payoff (Zhao, 2018). Amelie Gamble (2019) added another angle to the relationship of financial scarcity and temporal discounting with her article. She found instances where individuals would over- borrow in order to attain a product that was unaffordable for them would increase the likelihood of temporal discounting (Gamble, 2019).

In this study we will examine the impact that financial scarcity has on temporal discounting and whether power will moderate the effect that financial scarcity has on temporal discounting. Based on previous research, we believe there is a connection between these variables. As a result, I hypothesize:

H1: When faced with situations of financial scarcity individuals with higher power will be less prone to temporal discounting whereas individuals with lower power will be more likely to temporally discount.

2.3 The Mediating Effect of Cognition on the Relationship between Scarcity and Temporal Discounting

Prior research has indicated that there exists a possible mediated relationship between financial scarcity and temporal discounting. Cognition seems to be the variable that links both financial scarcity and temporal discounting as individuals with higher financial control tend to have higher cognitive abilities than individuals with more financial scarcity. For example, in Mani's (2013) article, they give an example of how "poverty- stricken children have a higher likelihood of having hindered brain development leading to a reduced cognitive capacity as an adult" (Mani et al., 2013). Along on the lines of cognitive capacity as mentioned by Mani and colleagues (2013), theorists have found a relationship between the effect that scarcity has on an individual's cognition and temporal discounting. Specifically, Anuj Shah and colleagues in their 2012 article pointed out that "the poor often behave in ways that reinforce poverty" (Shah et al., 2012). Mullainathan's (2017) article looks specifically at Indian sugarcane farmers in a couple of districts in

Tamil Nadu, India. In this article it is believed that “poverty captures attention, triggers intrusive thoughts, and reduces cognitive resources” (Mullainathan, 2017, p. 980). In the same article, these farmers were more likely to pawn items off at a higher rate and borrow more loans from lenders during the pre-harvest than in the post-harvest. They explain how when making decisions, depending on the degree of scarcity, an individual tends to focus on a task more seriously in times of great scarcity. Even in the results of the study, Mullainathan and colleagues also found that it took participants longer to answer questions and were more likely to make mistakes pre-harvest than in the post-harvest (Mullainathan 2017). This really expresses the main point of the article that poverty or high financial scarcity can lead to more circumstances of temporal discounting as a result of impeded cognition. Shah and Mullainathan really highlight this relationship between cognition and temporal discounting by explaining how scarcity can shape how individuals look and react to problems. Charles Karrelis’s (2007) complements Mullainathan’s and Shah’s articles in that he agrees that poor people or those stricken with high financial scarcity are bad borrowers, savers, and prefer immediate consumption (Karrelis, 2007). He indicates that individuals with higher financial scarcity are more likely to see a marginal increase in consumption as worthwhile in the short term in order to get themselves out of their situation (Karrelis, 2007). However, in these circumstances it only further cements the individual in the never-ending cycle of poverty (Karrelis, 2007; Zhao, 2018; Shah, 2012).

In regards to power, there is a known effect of power on cognition. There is a plethora of prior research that supports the theory that there are differences in cognitive ability between people with high and low power. In a recent set of studies on power and cognition, Pamela Smith and colleagues carried out a number of different experiments to determine how individual's cognition was affected through exposure to different power levels. In Smith (2020), she highlights that in previous studies theorists look at the three core executive functions: inhibition, working memory and cognitive flexibility. In their experiments, it was found that higher power people performed better on tasks that required participants to remember old information while being introduced to new information. An increase in creative responses was also conveyed in high powered individuals which related directly to cognitive flexibility (Smith et. al., 2020). Meanwhile for low power

individuals Smith and her colleagues discovered that the results were the opposite. Participants that were primed for low power showed a proneness to goal neglect and a deficiency in maintaining a goal in working memory. These results have a correlation with the approach/inhibition theory that was introduced by Keltner (2003), specifically that the powerless have a reduction of efficacy in goal pursuit as a result of having fewer resources or less motivation than the powerful (Smith et. al., 2008).

I intend to examine in this study if there is a correlation between financial scarcity and temporal discounting with cognition as a mediator. I also intend to investigate the effect of power as a moderator. In Keltner (2003) article, he points out a relation between power and temporal discounting. Specifically, he agrees with Manning and colleagues that "high power individuals tend to have higher cognition, as a result of being able to work without constraint or inhibition, whereas low power individuals tend to have lower cognition as a result of inhibition and subjection to social threats" (Keltner et al., 2003, p.268-269). I will investigate to see if an aspect of power has an effect and to what extent on an individual's decision making in our hypothesis below. Therefore, I hypothesize that;

H2: In situations of high financial scarcity individuals with high power will have an increased cognitive capacity and decreased temporal discounting in comparison with individuals with low power who will have decreased cognitive capacity and increased temporal discounting.

2.4 Power & Scarcity on Exploitative Behavior

Ana Guinote in her 2017 article agrees that power has an effect on cognitive practices by increasing prioritization, selective attention to goal relevant information, creativity and flexibility. Power helps to raise self-expression while also leading to manifesting more individual thoughts, emotions and predispositions. She also highlights though that this could lead to magnification of people's egocentricity leading to corruptive behavior among individuals who do not exercise power ethically (Guinote, 2017).

Many studies have been presented where theorists debated the different relations between power and behavior. Many theorists agree that high power individuals are more likely to exploit lower power individuals in order to get ahead or maintain their power level. What they tend to disagree on is how. Overbeck and colleagues discuss in their 2001 article that behavior depends on the workplace. Leaders in a more product-centric organization might be more prone to stereotyping than in organizations that are more service based (Overbeck et. al., 2001). Anne Quigg agrees with Overbeck et al's assessment but highlights that power and abusive behavior can be more common in different sectors. Specifically, Ann Quigg examines workplace behavior in the arts where power and abusive behavior is quite commonplace. Within the arts sector, it is a common belief that those who pursue a career in the arts are chasing a dream or passion. In reality, it is also a place of business and career advancement; however, due to the ideas surrounding the arts, it is common to see workplaces in dire need of resources. Ann Quigg highlights in her article that, "73.5% of art workers perceive their pay to be low and are very used to dealing with a lack of resources" (Quigg et al., 2011, p.5). She also notes that, "in times of economic hardships, such as the 2008 recession that hit America, arts organizations around the country saw an increase in exploitation among the arts organizations" (Quigg et al., 2011, p.5). Scarcity can lead to cognitive diminution and to more exploitative behavior between individuals with high power and low power.

This idea between power and behavior complements Barends and his colleagues' belief that the tendency for high power people to behave in a more corruptive way stems from psychological

variables. Specifically, it aligns with the power distance theory and approach/inhibition theory mentioned by Keltner and Magee. According to the power distance theory, power increases the feeling of social distance resulting in a reduced interest in others' thoughts and feelings. Meanwhile the approach/inhibition theory, states that power causes individuals to focus and act on personal goals (Keltner, 2003).

Barends (2019) proposed the use of economic games in order to examine different conditions that may foster these variables that lead to corruptive behavior. In the study, they performed many games and manipulated the level of conflict to either encourage individuals to act in a self-serving fashion or in a way that promoted cooperative behavior (Barends, 2019). They found that their findings supported their hypothesis that when individuals feel no constraint the likelihood of exploitative behavior among the high powered increased. They believe that there is a sort of freedom that power gives these individuals that absolves them of any potential punishment or retaliation that gives them this sense of absolute power (Barends, 2019).

Barends and his colleagues are not the only theorists that believe the relationship between power and behavior is psychological. Trevor Foulk and his colleagues concluded in their study that the abusive leadership and perceived incivility on a leader can have an impact on the well-being of their employees or those who follow them (Foulk, 2018). Swanner, in his article, looks at the power of incentives. Specifically, how incentives can encourage individuals in high power to accept exploiting individuals with low power through materialistic and egocentrically ideals. In the experiment conducted by Swanner and his colleagues, they found that high power people were more willing to agree to false incriminating statements as long as they were offered an incentive (Swanner et. al., 2015).

In this study, I will follow an approach similar to Barends and his colleagues. Specifically, I will utilize the economic games to explore different levels of monetary distributions to see if participants are more likely to choose more exploitative behavior when given the option. Based on the previous reviewer I hypothesize that:

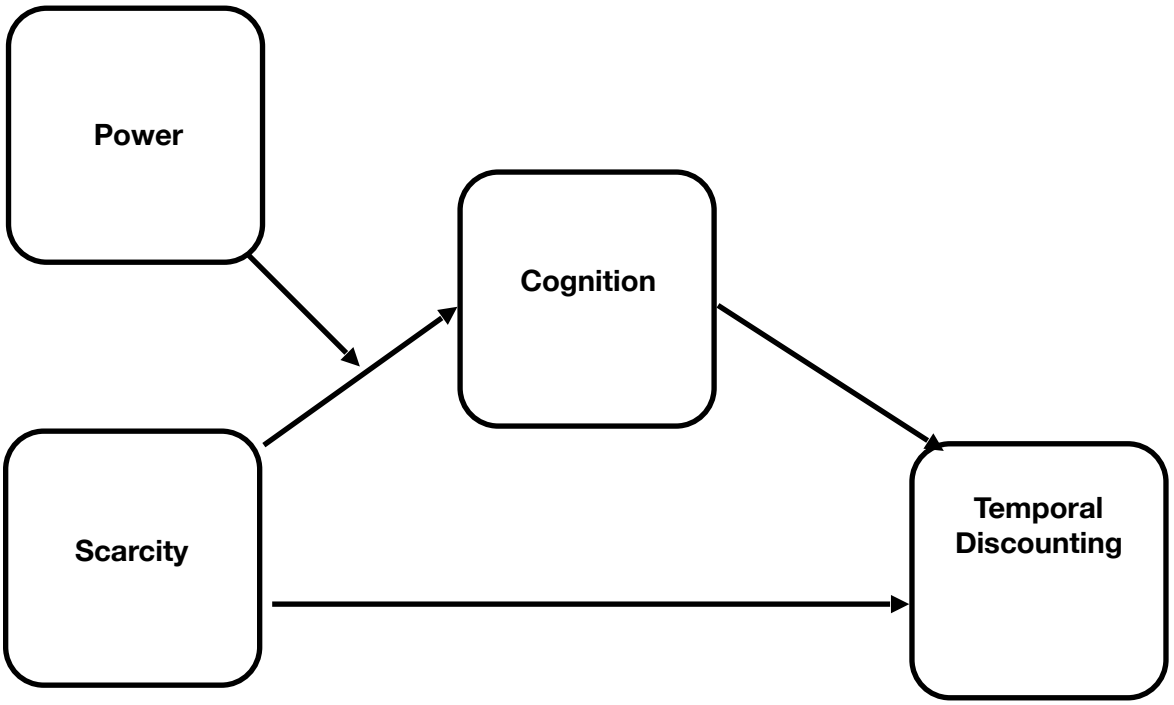
H3: Financial scarcity leads to higher exploitation.

H4: Financial scarcity leads to higher exploitation among higher power than lower power individuals.

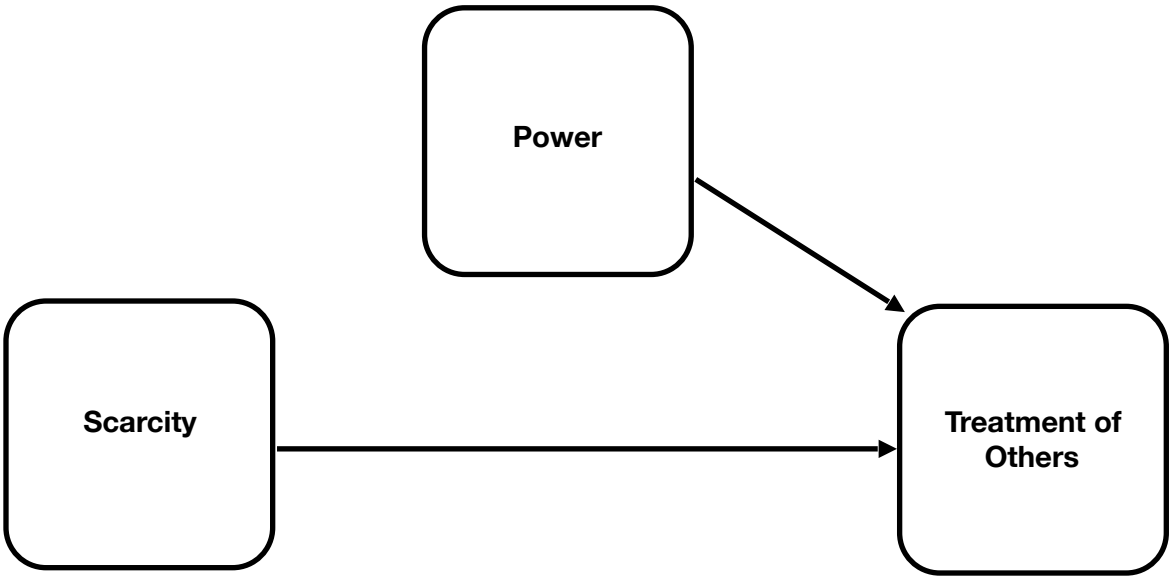
2.5 Conceptual Models

Below we have illustrated two conceptual models that hope to clarify what this study is looking to measure.

Conceptual Model 1:



Conceptual Model 2:



3. Methodology

This chapter explains the methodology employed to examine the aforementioned research questions. It explores the research strategy and design, the sample and the experimental process that led to the results. All measurement scales used to ascertain the relationship between the variables will be characterized.

3.1 Research Strategy & Design

This study aims to conclude the effects of financial scarcity on two different dependent variables. In the previous section we illustrated two different conceptual models. In the first conceptual model we intend to test the effect that financial scarcity has on temporal discounting. I also wish to ascertain whether or not there is a mediated relationship between financial scarcity and temporal discounting with cognition as the mediator variable. Power is my moderator variable that tests whether the relationship between the independent variable and the mediator depends on the level of power. The second model looks at the effect that financial scarcity has on exploitative behavior, again, with power as the moderator variable.

In order to test this, I designed an experimental study between these variables to determine if there is an interdependent link between them. While manipulating the independent variable of financial scarcity I seek to control extraneous factors prior to the experiment so they cannot influence the findings thereby ensuring the validity of our results. I choose to measure individuals' sense of power in order to examine how power moderates the effect of financial scarcity on participants. This study was conducted through Qualtrics, as a way to decrease the risk of researcher bias as the research administrator could influence results.

3.2 Participants

This study was distributed through Facebook and WhatsApp. Participants were chosen based on their participation within the arts. I did not pass it through Mechanical Turk (M-Turk) or other well-known crowdsourcing platforms.

The sample size was determined based on the specific conditions of the study. Within the sample 49.3% are made up of females and 43.4% are males. Most of the participants are mainly from the US; however, there is a small percentage of Portuguese and other countries. The age range in this study was very diverse ranging from participant to participant; however, the bulk of participants were between the ages of 20-29 with the mean being 27.98 with a standard deviation of 9.93. This also aligns with education as most participants were currently in their collegiate years completing their degrees. The study was not limited to a specific country, age group, or gender.

3.3 Procedure

The study began with a detailed explanation of the different variables that would be measured as well as an informed consent form. From here, each participant measured their current level of power using the Sense of Power Scale listed in Anderson et al. (2012) article. We utilized eight questions to measure an individual's power level. I implemented an attention check in order to make sure that the candidates were paying attention. Following this, I introduced candidates to the independent variable, financial scarcity. Based on the Qualtrics randomizer, participants were placed in one of two groups: those with financial scarcity and those without. One group was showed an article where the focus was on financial scarcity while the other was showed an article where the focus was on financial control. Following these articles, I measured how much of an effect this had on the individual by asking participants how much they feared for their financial future. This was the manipulation check in order to assess how effective I was in varying my participants answers from the previous section.

Next, participants were introduced to the mediator variable: cognition. Cognition was measured through an adapted version of the Raven Matrices. I wanted to examine how accurate the participant was in responding to the question. An element of time was also measured by use of a countdown clock as a time constraint. Participants had 30 seconds to decide before time ran out. Once it did, it would automatically go to the next question. Previous research in working memory has shown that individuals in high power positions tend to also have a higher working memory while those in low power positions portray the opposite (Keltner, 2003). In managerial situations this is one of the aspects that have an effect on decision making and behavior. I wanted to examine these effects on individuals when faced with financial scarcity.

Following this, I evaluated the first dependent variable: temporal discounting. In this scenario, I measured temporal discounting for each individual by presenting a situation where monetarily they had to choose between two prices and whether or not they received it now or in 30 days. I set 10 situations like this. In each situation, for the participants who chose to wait 30 days, they would be presented with the next question with the amount decreasing by 50, but the situation remaining the same. I wanted to measure at what point that individual would choose immediate gratification.

In the following section I introduce the second dependent variable: behavior. Studies have shown that individuals with high power are more likely to exploit those with low power in order to get what they want (Barends, 2019). This section of the study was meant to evaluate if this was the case more so under scarcity conditions. I used the Triple Dominance Measure to evaluate the situation. In this experiment each individual is exposed to a situation where they are paired up with a hypothetical person and they need to decide how they will distribute a monetary amount between each other. There are three options to choose from and are split accordingly: 50/50, 90/10, and 70/30. This part of the study evaluates the treatment of others. Only one in this scenario is fair while the other two options are unfair though one is more crippling than the other. A previous study has suggested that when individuals are given power or, in this case, the option to choose

how much they receive monetarily over another, they will choose the option that best benefits them (Swanner, 2015).

Following this, I asked participants their demographics such as age, gender, education, and nationality. At the end of the study, I finish with a thank you to the participants for taking their time to participate in the survey.

3.3.1: Independent Variable

The independent variable that was examined in this study is financial scarcity. Specifically, the study is interested in exploring financial scarcity and its effects during the COVID-19 pandemic. Due to the predominance that the COVID-19 pandemic has had in the world many individuals either lost their jobs or suffered a large pay decrease which put stress on the individual and how they could make a living. In the experiment, I created two articles based on articles that I had previously read about the pandemic and styled it so that one reflected the dire situation of financial scarcity while the other reflected financial control in that the pandemic has redefined how we work. Each participant was randomly put into one of two groups: financial scarcity and financial control. 50% of the participants read the article about financial scarcity while the other 50% read the article about financial control. Both groups were then asked how much they each feared for their financial wellbeing.

Another independent variable, that unlike financial scarcity was not manipulated, is power. For power, I specifically used the same sense of power questions based off of Anderson and his colleagues' study in 2012 in order to ascertain the participant's current power level. The assessment of our participants' level of power happened at the beginning of the experiment. They were given the option to choose from a range of answers starting from strongly disagree to strongly agree in order to answer the eight sense of power questions. Below are the eight questions that we utilized in the study.
In my relationships with others…

1. I can get him/her/them to listen to what I say.
2. My wishes do not carry much weight.
3. I can get him/her/them to do what I want.
4. Even if I voice them, my views have little sway.
5. I think I have a great deal of power.
6. My ideas and opinions are often ignored.
7. Even when I try, I am not able to get my way.
8. If I want to, I get to make the decisions.

3.3.2: Dependent Variables

The two dependent variables in this study are temporal discounting and exploitative behavior. Temporal discounting determines whether an individual is more attuned to delayed gratification or immediate gratification. In previous studies, it has been shown that individuals with a high level of financial scarcity tend to temporally discount for the short term in order to alleviate the stress of scarcity (Karrelis, 2007). Studies have also shown that individuals with high power tend to be more prone to delayed gratification while low power individuals lean more towards immediate gratification. In this study, we look to see if temporal discounting plays an essential role between financial scarcity, power, and cognition.

The second dependent variable that was examined was exploitative behavior. Research has shown that individuals with high power are more likely to exploit those with low power. I explored this question with a money distribution scenario. Each participant was told of the same hypothetical situation where they were in charge of deciding how they and another person would split money. They were given three different monetary choices. I wanted to see if previous research would pertain to our participants as well. This test explained above is called the Triple Dominance test. It is used to determine the type of choices that individuals make. In this study,

there are three categories that our participants could be placed in: prosocial choices, individualistic choices, and competitive choices. Prosocial choices are for participants who choose fairness. Individualistic choices are for participants who chose more for themselves than the other person. Competitive choices are for participants who chose exponentially more for themselves to the point that the other person could not hope to catch up to them. The results of these experiments can be seen in the next section when we speak about the results of our study.

3.2.3: Mediator Variable

My mediatory variable for the first model is cognition. In the study I utilized an adaptation of the Raven Matrices to determine the cognitive capacity of our participants. I provided an example of one of the matrices and then I showed participants four different matrices and asked them to determine what came next in the sequence. I added a time element by showing a timer counting down from 30 seconds. This was strategically placed after the articles about financial scarcity because I wanted to see how participants' reactions might have changed as a result of the manipulation. Studies have shown that cognition plays a mediating role between financial scarcity and temporal discounting. In Zhao (2018), he agrees with Karrelis (2007) that there is a relationship between financial scarcity and temporal discounting and that cognition playing a mediating role between these two variables (Karrelis, 2007; Zhao, 2018).

4. Results

The following chapter will focus on the results of the study. All relevant results will be presented, and statistical methods used to verify the hypotheses of the study. SPSS Statistics Version 25 was used to carry out all analyses.

4.1 Data Preparation & Cleaning

From 193 participants, 57 participants were excluded. 46 of them were excluded due to incomplete parts within the study or not finishing the study. 10 were excluded based on failing the attention check, and 1 participant was excluded for not consenting to be a part of the study. Therefore, the total valid number of participants for the study was 136. For the study, I dichotomized the power variable before running the ANOVAS between high and low power.

4.2 Scale Reliability

To measure scale reliability the Cronbach's alpha was utilized to determine reliability. For our study we utilized the Anderson Sense of Power Scale. The Cronbach's alpha for this scale was 0.843. Based on Gliem and Gliem (2003) this alpha is considered to be good and indicates good internal consistency.

4.3 Manipulation Check

In order to test for manipulation effectiveness, I ran a one-way ANOVA with scarcity (with scarcity vs. without scarcity) as the independent variable and the manipulation check (fear for financial future) as the dependent variable. The difference in means between participants who

experienced financial scarcity and participants who experienced more financial control was not statistically significant as can be shown with an F(1,134)=0.260 and a p-value of p=0.611. For more detailed information, please see Appendix B.

4.4 Hypothesis Testing

4.4.1 The Effect of Financial Scarcity & Power on Temporal Discounting

Hypothesis 1 predicted that individuals feeling powerful would be less prone to temporal discounting whereas individuals feeling rather powerless would be more likely to temporally discount. In order to compare the main effects of financial scarcity and power on cognition, I ran a two-way ANOVA analysis. In the analysis, I considered financial scarcity (with scarcity vs. without scarcity) and power to be my independent variables and temporal discounting to be my dependent variable. The results of this test showed that both the relation between financial scarcity and temporal discounting and the relationship between power and temporal discounting were not statistically significant. In the relation between financial scarcity and temporal discounting, the results yielded an F ratio of F(1,131)=0.012 and a p-value of p=913. In the relation between power and temporal discounting, the results yielded an F ratio of F(1,131)=0.040 with a p-value of p=0.842. The interaction of scarcity and power on temporal discounting also proved to be not significant with a F-ratio of F(1,131)= .409 and a p-value of p=.524.Therefore, I cannot reject the null hypothesis. For more detailed information please see Appendix C.

4.4.2 The Effect of Financial Scarcity on Exploitative Behavior

Hypothesis 3 predicted that financial scarcity would positively influence exploitative behavior. In order to investigate this, I utilized a one-way ANOVA test in order to examine the main effects. In this analysis I considered financial scarcity (with scarcity, without scarcity) as my independent variable and behavior (exploitative behavior) as my dependent variable. I did not use any media-

tors or moderators for this test. The analysis was done with a 5% significance level (95% confidence interval).

The result of the ANOVA show that there is no statistical significance. The effect of financial scarcity on exploitative behavior the resulted on an F-ratio of F(1,13)=0.029 and a p-value of p=.866. As a result, I cannot reject the null hypothesis. For more detailed information please see Appendix D.

4.4.3 The Effect of Financial Scarcity & Power on Exploitative Behavior

Hypothesis 4 predicted that financial scarcity would positively influence exploitative behavior in individuals with high power. In order to investigate this, I utilized a two-way ANOVA test in order to examine the main effects. In this analysis I considered financial scarcity (with scarcity, without scarcity) as my independent variable and behavior (exploitative behavior) as my dependent variable. Power was utilized as a moderator variable in order to measure the strength of financial scarcity on the likelihood of exploitative behavior depending on one's power. The analysis was done with a 5% significance level (95% confidence interval).

The results of the ANOVA show that there is no statistical significance between the variables with our current data. The effect of power on exploitative behavior the resulted on an F-ratio of F(1,127)=.402 and a p-value of p=.527. The effect of scarcity on exploitative behavior the results yielded an F-ratio of F(1,127)=.008 and a p-value of p=.928. The interaction of scarcity and power on behavior also proved to be not significant with a F-ratio of F(1,127)= .196 and a p-value of p=.659. Although there is a positive trend in the interaction between these variables, the interaction is not statistically significant. Therefore, I cannot reject the null hypothesis. For more detailed information please see Appendix E.

4.4.4 Moderated Mediation Model

Hypothesis 2 predicted that scarcity has a positive impact on temporal discounting with cognition (working memory) acting as a mediator between these two variables and power acting as a moderator determining the strength between these variables.

In order to test for mediation and moderation, I utilized Model 7 of the Hayes Macro Process. This regression analysis will assist in studying how financial scarcity, and cognition have an effect on temporal discounting and how power works to moderate this relationship. This analysis was done with a 5% significance level and 5000 bootstrap samples.

In this analysis financial scarcity (with scarcity, without scarcity) acts as the independent variable, cognition is the mediator variable, temporal discounting is the dependent variable, and power is the moderator variable. For more information, please see Appendix F.

Based on the outcome of this model's indirect effects and index of moderated mediation, there is no statistical significance that indicates that the relationship between financial scarcity and temporal discounting are mediated by cognition (working memory) or moderated by power. In regards to cognition as a mediator variable, this is indicative of the bootstrap variables where significance is measured in the lower level confidence interval (LLCI) and the upper level confidence interval (ULCI). In this model the range of the LLCI (-.080) and ULCI (.070) for all variables pass through zero, indicating that the results are not significant. For the index of moderated mediation the same conclusion can be drawn as the results of both the LLCI (-.115) and ULCI (.080) pass through zero.

Although these results express no statistical significance to support a moderated mediation effect on financial scarcity and temporal discounting, it is important to note the interaction of the singular variables on temporal discounting. Looking at the betas of both scarcity and cognition it is clear to see that both have a negative relationship with temporal discounting with betas of b=-.002 and b=-.082 respectively. Looking at the table for the outcome variable, temporal discounting, it can be seen that the beta for the interaction is 0.304. Although not significant as dic-

tated by the p-value of p=0.447 and the bootstrapped confidence intervals passing through zero, it is important to note in the results. It is also important to note that separately only power has a positive relationship with temporal discounting (b=0.274). For financial scarcity and working memory (cognition) the relationship is negative with a beta of b=-0.18 and b =-0.93 respectively. Looking at the pathway connecting financial scarcity and cognition, it is also important to note that the interaction between financial scarcity and power also share a positive relationship with cognition. With a beta of b=0.69, there exists a positive relationship between financial scarcity and power on cognition. Similarly, like in the previous section when separated only one variable still has a positive relationship with cognition. Financial scarcity has a positive relationship of b=0.058 while power has a negative relationship of b=-0.026. Although the variables and the interaction of these variables on cognition are not significant dictated by the p-values being greater than 0.05, it is still important to note this trend in the data for future research. This will be looked at more thoroughly in the following section.

5. General Discussion

5.1 Research Findings & Main Conclusions

Financial scarcity became a prevalent topic during the pandemic. Many people were laid off of jobs and the fear of financial uncertainty as a result of the pandemic really weighed heavily on individuals. As a result of financial scarcity and the pandemic, peoples' behavior changed and individuals really began to act in ways that served themselves. Individuals began to plan more for the short term as well as nobody was really certain about the future in the pandemic. Therefore, in the research I sought to understand the effect that financial scarcity had on people's temporal discounting by exploring the mediating effect of cognition and moderating effects of power in this relationship. I also sought to understand the effect that financial scarcity had on exploitative behavior moderated by their level of power.

The study's results concluded that we could not reject the null hypotheses. This means that we could not determine if an effect existed based on the data we collected. Therefore, we could not conclude for Hypothesis 1 if there is a direct relationship between financial scarcity and temporal discounting. We also could not conclude for Hypothesis 2, whether or not cognition and power had a mediating or moderated effect on the relationship between financial scarcity and temporal discounting. For Hypothesis 3 we also could not conclude if financial scarcity had an impact on exploitative behavior. Finally, we could not conclude for Hypothesis 4 whether power helped moderate the relation of financial scarcity and exploitative behavior.

My findings did not align with what theorists and philosophers have surmised. However, it is entirely possible that based on the data, for whatever reason, I may have missed the effect. My first hypothesis examined the interaction between financial scarcity and temporal discounting. Al-

though it was not statistically significant when financial scarcity and power are combined and interact with temporal discounting, looking at the respective betas, the data did disclose a positive correlation between these variables. Looking separately at financial scarcity and power in Appendix F, it was only power that by itself had a positive correlation with temporal discounting. Prior research from theorists who have studied the relationship between power and temporal discounting like Magee (2010) and Trope and Liberman (2010) looked at how individuals with different power levels reacted to situations of high scarcity based on construal levels. They surmised that individuals with high power have a high construal level which makes them more future oriented and less likely to fall prone to situations of temporal discounting (Magee, 2010; Trope & Liberman, 2010). Likewise, Joshi and Fast's (2013) experiment showed that those with high power had an enhanced connection to their future self which resulted in an increased ability to look beyond the present when making decisions. My data suggests these relationships might not be as stable as previously thought.

Our second hypothesis examined whether cognition and power had a mediating and moderating effect respectively to financial scarcity and temporal discounting. Although it was shown based on our data that cognition did not play a significant mediating role between these two variables and power did not play a significant moderating role, when we looked at the separate pathways, I found something interesting. In the case of the path connecting financial scarcity to cognition, the interaction between financial scarcity and power was positive. Looking separately at the two different variables specifically it was financial scarcity that had a positive correlation. When combined with power, this shows that although power and cognition have a negative correlation to one another, when combined with financial scarcity, the relationship is positive. This means that, in my data, the effect of power had a negative influence on participant's cognitive capacity. However, when coupled with financial scarcity, people's cognitive capacity improved. Meanwhile, the pathway connecting cognition to temporal discounting had a negative correlation as did the pathway connecting financial scarcity to temporal discounting. Previous research on the subject did not support the hypothesis. Keltner (2003) examined the relationship between power and cognition and found that higher power individuals tend to have a higher construal level than

lower power individuals (Keltner, 2003). This relationship was complemented by Magee in his 2010 article that dictated that individuals with high power tend to have a high construal level (Magee, 2010). Trope and Liberman furthered this point by explaining that the relationship between power and cognition made individuals with high power very future oriented and less likely to fall into situations of temporal discounting (Trope & Liberman, 2010). Joshi and Fast (2013) also complimented Trope and Liberman's conclusion. By looking at the data in this study, it shows a clear disagreement with previous theorists as the direct relationship between power and cognition was negative. This does not rule out the possibility that a different variable could mediate this relationship.

My third hypothesis indicated that financial scarcity leads to higher exploitation. For Hypothesis 3 we could not conclude if financial scarcity had an impact on exploitative behavior. Although there was a positive correlation between the variables, it was not statistically significant. My fourth hypothesis dictated that there is a moderated relation of power on financial scarcity and exploitative behavior. For this reason, I thought it was important to link both hypotheses. In regards to the results of Hypothesis 4, power did express a positive influence on the relationship between financial scarcity on exploitative behavior. However, the results of this study did not reach significance. It is possible that a trend can exist in the data that I missed but as it stands now it still disagrees with prior research. Barends (2019) indicates that individuals with high power will act in self-serving ways. Both Barends (2019) and Keltner (2003) linked this behavior to the power distance theory where power increases the feeling of social distance resulting in a reduced interest in others' thoughts and feelings. In Barends (2019) this idea was tested through economic games. They found this to be true in situations when the individual felt no constraint or a sense of complete freedom (Barends, 2019). Swanner (2015) examined in his study how incentives could encourage individuals in high power to accept exploiting individuals with low power through materialistic and egocentrically ideals. Overbeck (2001) dictated in her article that exploitative behavior could be seen as more commonplace in certain workplace situations over others. She assessed that this was due to an increase in stereotyping between individuals of different power levels (Overbeck, 2001).

Although none of the hypotheses in this study proved to be statistically significant or agree with previous research, these discrepancies in the data are useful to note as they can pose great questions for future research. For more detailed information about limitations and future research please see Section 5.3.

5.2 Academic and managerial relevance

The present study offers findings that are relevant both to academia and managerial contexts. While power has been thoroughly researched by many theorists, it has not been compared with financial scarcity quite in the way that it has been presented in this study. Specifically, looking at the relationship between financial scarcity and temporal discounting being able to understand the behavioral choices of an individuals under different situations could help future leaders in positions of authority to help their team dynamics and relations. The correlation between financial scarcity and temporal discounting aligns with literature from past theorists. Joshi and Fast (2013) defined temporal discounting as an individual's choice to focus on present concerns rather than future. As a result, temporal discounting is usually considered to be a reduced willingness to delay gratification such as saving money (Joshi & Fast, 2013). What is interesting to note is the correlation of power on the relationship between financial scarcity and temporal discounting. Previous research has shown that individuals with high power tend to have a higher construal level and tend to be very future oriented (Magee, 2010; Trope & Liberman, 2010). As a result, as seen in Joshi and Fast's (2013) these individuals are less likely to fall prone to temporal discounting. Specifically, findings showed that individuals with high power showed an enhanced connection to their future self. The article concluded that futuristic individuals are less likely to temporally discount (Joshi & Fast, 2013). The relationship between financial scarcity, power, and temporal discounting that is explored in this study can help researchers develop new ideas and studies to further delve into detail on these concepts explored here.

Another important finding from the research is the correlation between financial scarcity, power, and exploitative behavior. Specifically, it is important to see how the variable of power can influence the relationship between financial scarcity and exploitative behavior. Previous research from theorists like Guinote (2017) explains how power can magnify people's egocentricity leading individuals to commit corruptive behavior among individuals who do not exercise power ethically. Barends (2019) examines why individuals behave in exploitative behavior. He concludes that this behavior is linked to an increase of psychological social distance resulting in a reduced interest in others' thoughts and feelings (Barends, 2019). This psychological social distance theory is also mentioned in Keltner's (2003) paper that examines how power can have an influence on how individuals behave with one another based on their sense of power. This is important especially in managerial situations as the influence of power can have varying effects on individuals. If not dealt with correctly it could have a drastic effect on team dynamics, relations, and company success. Trevor Foulk (2018) and colleagues found in their study that abusive leadership and perceived incivility had an impact on the well-being of their employees and those around them. Along with helping future leaders and managers, this relation of power on financial scarcity and exploitation can further add to the academia on the subject. Despite not being able to validate any of the hypotheses, this study has taken the steps towards understanding the questions of the study and delving further into the subjects discussed.

5.3 Limitations and Future Research

This study has some limitations that should be considered in order to benefit those who choose to do future research on the topic. First although we passed the minimum number of participants required for the study, it is always good to have a very large sample size. I believe that I could have had more participants in the study if I had cut down the total time of the study to between 5-7 minutes. In my experiment, I found that some people would not finish the study, or they would finish the study but leave out certain sections. This made it difficult to validate their results so in the end I would leave them out entirely because I was not sure if I could trust the data. If I were

to shorten this for future experiments, I believe the number of participants who left sections out or did not complete in its entirety would decrease. I also feel that I could have used my resources better when collecting my data. I utilized WhatsApp and Facebook channels when collecting my data. In retrospect it would have been better to also utilize other platforms like M-Turk. As a result, I would have received more response to my study. This, of course, would increase my sample size and data collection.

Another limitation that I overlooked in my experiment was the conceptualization of power. The way the study was set up did not allow me to understand how an individual conceptualizes power, which is typically seen as an opportunity or responsibility. Overbeck (2001) explains that power is seen sometimes to be a form of responsibility that individuals take upon themselves. Specifically, "people typically occupy powerful positions because they have shown that they are competent and dedicated leaders who feel a sense of responsibility towards their employees and successfully lead whatever group of workers to whom they have power" (Overbeck, 2001, p. 563). As a result, I ended up combining both in my study.

In fact, this limitation could pose a subject for future research. As I was unable to differentiate how individuals in my study were able to conceptualize power, this may have affected my results. In Overbeck (2001) she explains how power is subtle. Depending on the structure of the business, power can be conceptualized differently. In person-centered organizations power can be seen as a sense of responsibility that high powered people feel over low powered people. Whereas in product centered organizations there is less need to individuate as high powered people regard low powered people more as cogs in a wheel and less need to understand them (Overbeck, 2001). It would be most interesting to see how the conceptualization of power would differentiate in situations outside of business on a more situational level.

In terms of future research, I also believe looking at financial scarcity on fairness, power on fairness, and/or behavior on fairness would be something beneficial to further the study or add an angle for future theorists. When reviewing the data, specifically in the exploitative behavior sec-

tion of the study, many people chose the prosocial choice or the 50/50 choice when it came to splitting hypothetical money. They had the option of taking advantage of the other individual, but many chose to split it fairly between them. In our study we highlighted it as an aspect of morality, but there is research on power and fairness that could further this study. In Wang (2015), Wang and his colleagues examined how construal levels mediated the relationship between power and fairness. Future research could explore if fairness plays a role in financial scarcity and exploitative behavior.

Lastly, for future research it might be compelling to look into different demographics. This study did not focus on a specific group of people. It would be fascinating to see if results were different among individuals in a different sector of work or if the individuals lived in different countries. Cultural differences could have a different effect on individuals while also different job sectors could divulge more information.

6. Conclusion

Regardless of the study's conclusion, more studies can be performed over the subject of financial scarcity. Especially with the COVID-19 pandemic, the effects of financial scarcity on the short term and long term will definitely be of importance for years to come. Although our results did not hold any statistical significance, there was evidence of possible trends in the data. At the very least, this thesis will only help further research into financial scarcity, temporal discounting, cognition and exploitative behavior.

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8. Appendix

Appendix A: Qualtrics Survey

Impact of Power and Scarcity on Decision Making

Start of Block: Intro

Q1 Welcome and thank you for participating in this study!

This study consists in reading a testimonial regarding job scarcity in the workplace and answer some questions regarding your cognition and behavior. In total this study will take around 3-5 minutes to complete. Please answer all questions as honestly as possible. Answers are anonymous and confidential, which means that we will not be able to identify different people's responses. The collected data will only be used for research. Your participation will contribute to research within the scope of a master's thesis.

Please reply at once, without any stops or distractions and please pay attention to all the questions that are asked. If you have any questions regarding this study, please contact me: Daniela Rivera (152119119@alunos.lisboa.ucp.pt).

Thank you very much.

End of Block: Intro

Start of Block: Consent

Q2 Do you consent to take part in this study?

o Yes (1)

o No (2)

End of Block: Consent

Start of Block: Current Power Measurement

Q13 In this section, please answer to what extent you agree to disagree with the following statements below.

Q14 In my relationships with others, I can get them to listen to what I have to say.

o Strongly disagree (1)

o Disagree (2)

o Somewhat disagree (3)

o Neither agree nor disagree (4)

o Somewhat agree (5)

o Agree (6)

o Strongly agree (7)

Q16 In my relationships with others, my wishes do not carry much weight.

o Strongly disagree (1)

o Disagree (2)

o Somewhat disagree (3)

o Neither agree nor disagree (4)

o Somewhat agree (5)

o Agree (6)

o Strongly agree (7)

Q17 In my relationships with others, I can get them to do what I want.

o Strongly disagree (1)

o Disagree (2)

o Somewhat disagree (3)

o Neither agree nor disagree (4)

o Somewhat agree (5)

o Agree (6)

o Strongly agree (7)

Q20 In my relationships with others, even if I voice them my views have little sway.

o Strongly disagree (1)

o Disagree (2)

o Somewhat disagree (3)

o Neither agree nor disagree (4)

o Somewhat agree (5)

o Agree (6)

o Strongly agree (7)

Q22 In my relationships with others, I think I have a great deal of power.

o Strongly disagree (1)

o Disagree (2)

o Somewhat disagree (3)

o Neither agree nor disagree (4)

o Somewhat agree (5)

o Agree (6)

o Strongly agree (7)

Q23 In my relationships with others, my ideas and opinions are often ignored.

o Strongly disagree (1)

o Disagree (2)

o Somewhat disagree (3)

o Neither agree nor disagree (4)

o Somewhat agree (5)

o Agree (6)

o Strongly agree (7)

Q64 In my relationships with others, even when I try, I am not able to get my way.

o Strongly disagree (1)

o Disagree (2)

o Somewhat disagree (3)

o Neither agree nor disagree (4)

o Somewhat agree (5)

o Agree (6)

o Strongly agree (7)

Q56 If you are paying attention please respond strongly disagree.

o Strongly disagree (1)

o Disagree (2)

o Somewhat disagree (3)

o Neither agree nor disagree (4)

o Somewhat agree (5)

o Agree (6)

o Strongly agree (7)

Q65 In my relationships with others, if I want to, I get to make the decisions.

o Strongly disagree (1)

o Disagree (2)

o Somewhat disagree (3)

o Neither agree nor disagree (4)

o Somewhat agree (5)

o Agree (6)

o Strongly agree (7)

End of Block: Current Power Measurement

Start of Block: With Scarcity

Q34 Please read the following article and respond to the following questions in the subsequent sections.

Q33 Due to the effects of the COVID-19 virus, the world has seen many catastrophic changes in the past year. Over the course of the pandemic, over 1 million people have died and the financial state of many is at stake as never before.

In terms of jobs certain demographics have experienced more acute job loss than others. For example in the PEW Research Study, it is reported that those who did not lose a job had to reduce their hours or take a pay cut to the economic fallout that the pandemic has presented. (Parker, 2020) BBC News reported that between March when the lockdown began until September the number of people claiming unemployment benefits rose 120% to 2.7 million with sectors of business like hotels, arts, restaurants and tourism being hit the hardest. (King, 2020)

As a result, financial struggles among individuals have increased. The PEW Research Center reported last month that "among lower income adults, 46% say that they had trouble paying their bills since the pandemic started and roughly one-third (32%) say its been hard for them to make rent and mortgage payments." (Parker, 2020)

Governments have taken action to attempt to stop the spread of COVID-19 by installing curfews in cities and urging people to work from home. However, economists expect unemployment to continue to rise for the rest of the year without a return to pre-crisis levels approximately until 2022. (Parker, 2020)

End of Block: With Scarcity

Start of Block: Without Scarcity

Q35 Please read the following article and respond to the following questions in the subsequent sections.

Q37 Due to the effects of the COVID-19 virus, the world has seen many catastrophic changes in the past year. Over the course of the pandemic, over 1 million people have died and the financial state of many is at stake as never before. Although the economy has taken a hit as a result of the pandemic, it has also provided new opportunities.

An article from the Harvard Business review reports that due to the nature of this pandemic, it has given organization's opportunities to redefine jobs. It is reported that employees of different sectors are "doing tasks that they never could have imagined or in ways they wouldn't have thought of." (Jesuthasan, 2020). It has given leaders opportunities to reimagine work while giving employees different responsibilities in order to better respond to the changes in their organizations, consumer demand and employees.

One of the more common redefined methods in organizations is the portability of work for organizations and employees. Different companies like Bank of America as mentioned in the Harvard Business Review article "have converted more than 3000 employees from across the bank into positions intended to assist with consumer and small business customers." (Jesuthasan, 2020) This has also recently provided jobs to individuals who wish to work but may not feel safe to come into the office. (Jesuthasan, 2020)

Another common method being used is the talent exchange where companies will partner with one another and temporarily move employees without work from one company to the other in order to support workers in providing jobs and developing new skills and network. (Jesuthasan, 2020)

End of Block: Without Scarcity

Start of Block: Manipulation Check

Q55 How much do you fear for your financial future?

- o Not at all (1)
- o Very slightly (2)
- o Slightly (4)
- o Quite a bit (7)
- o A lot (8)
- o Extremely (9)

End of Block: Manipulation Check

Start of Block: Test of Working Memory/Cognition

Q11 In this section please answer the following logical test. It will consist of choosing which elements follow logically in the sequence of elements presented.

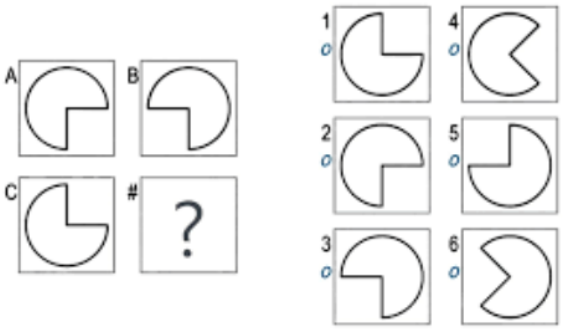
You will not have much time for this section. In fact you will have 30 seconds to answer each sequence. It is normal not to be able to answer them all correctly in a short period of time, but do try your best.
We have provided an example on the next page.

Q67 You will now be presented with four sequences. For each of the sequences please choose the element that logically follows by indicating its number.

Remember you have 30 seconds to answer each sequence.

Ready?

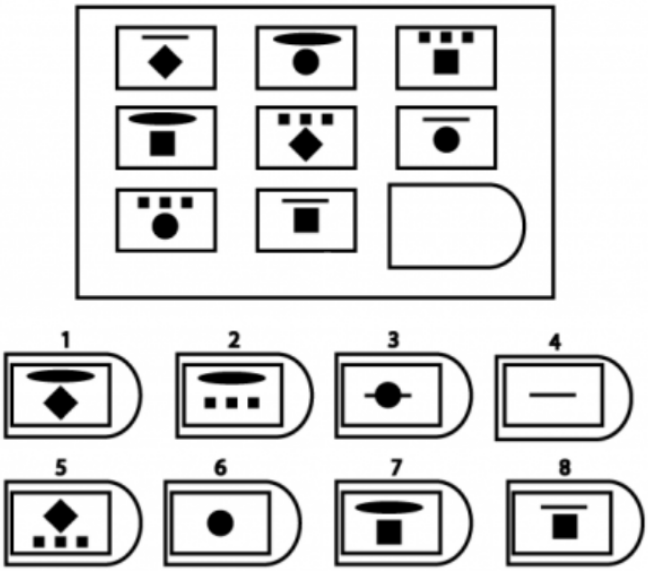
Example



The element that logically follows this sequence is the number 5.

Please, continue to start the Performance task.

Sequence 2



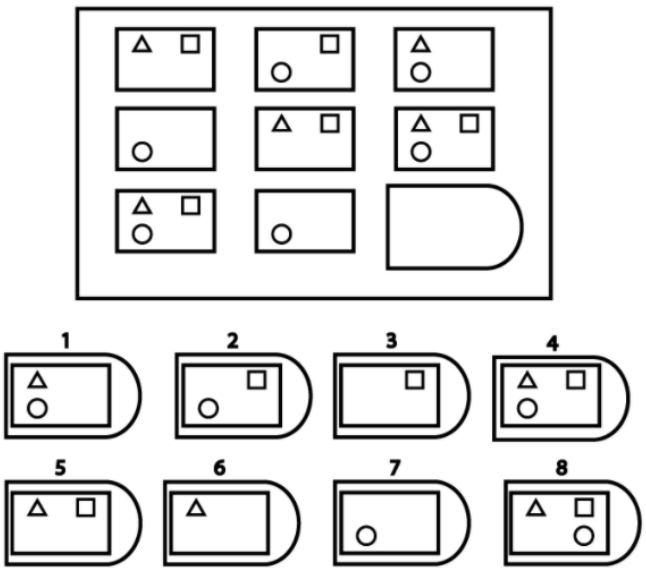
Q68

The element that logically follows is....

- 1 (312)
- 2 (313)

- 3 (314)
- 4 (315)
- 5 (316)
- 6 (317)
- 7 (318)
- 8 (319)

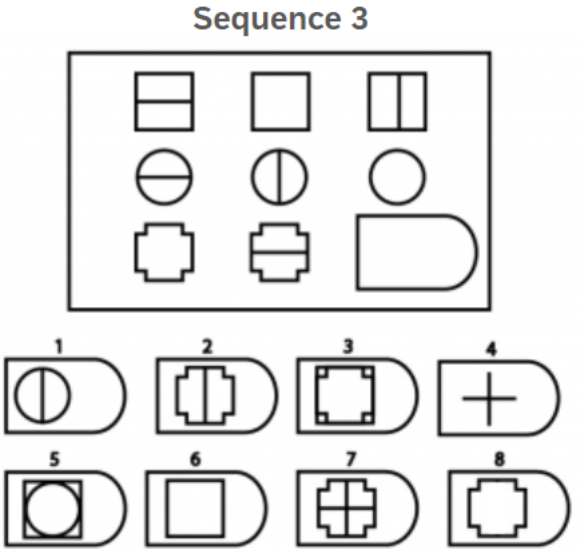
Sequence 4



Q69

The element that logically follows is....

- 1 (296)



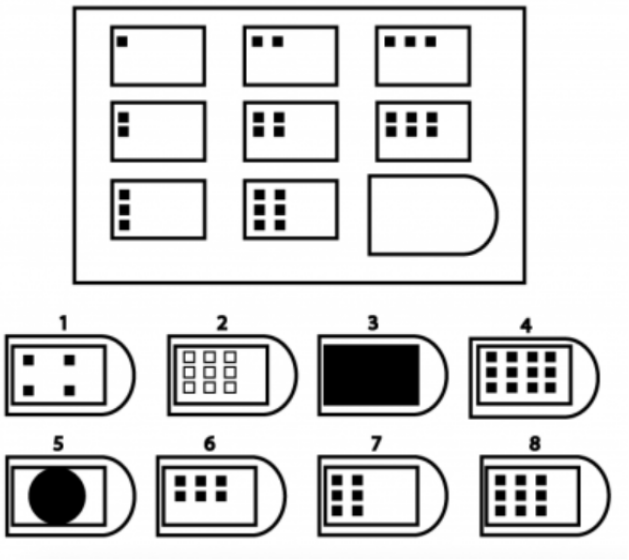
- 2 (297)
- 3 (298)
- 4 (299)
- 5 (300)
- 6 (301)
- 7 (302)
- 8 (303)

Q70

The element that logically follows is....

- 1 (296)
- 2 (297)
- 3 (298)
- 4 (299)

Sequence 1



- 5 (300)
- 6 (301)
- 7 (302)
- 8 (303)

Q71

The element that logically follows is....

- 1 (296)
- 2 (297)
- 3 (298)
- 4 (299)

o 5 (300)

o 6 (301)

o 7 (302)

o 8 (303)

End of Block: Test of Working Memory/Cognition

Start of Block: Temporal Discounting

Q10

Now we will ask you to consider a couple of choices and to answer as honestly as possible.

Q24 You can either choose to have €500 now or €1000 in 30 days. What would you choose?

o €500 now (1)

o €1000 in 30 days (2)

Skip To: End of Block If You can either choose to have €500 now or €1000 in 30 days. What would you choose? = €500 now

Q46 You can either choose to have €550 now or €1000 in 30 days. What would you choose?

o €550 now (1)

o €1000 in 30 days (2)

Skip To: End of Block If You can either choose to have €550 now or €1000 in 30 days. What would you choose? = €550 now

Q47 You can either choose to have €600 now or €1000 in 30 days. What would you choose?

o €600 now (1)

o €1000 in 30 days (2)

Skip To: End of Block If You can either choose to have €600 now or €1000 in 30 days. What would you choose? = €600 now

Q25 You can either choose to have €650 now or €1000 in 30 days. What would you choose?

o €650 now (1)

o €1000 in 30 days (2)

Q48 You can either choose to have €700 now or €1000 in 30 days. What would you choose?

o €700 now (1)

o €1000 in 30 days (2)

Skip To: End of Block If You can either choose to have €700 now or €1000 in 30 days. What would you choose? = €700 now

Q26 You can either choose to have €750 now or €1000 in 30 days. What would you choose?

o €750 now (1)

o €1000 in 30 days (2)

Skip To: End of Block If You can either choose to have €750 now or €1000 in 30 days. What would you choose? = €750 now

Q49 You can either choose to have €800 now or €1000 in 30 days. What would you choose?

o €800 now (1)

o €1000 in 30 days (2)

Skip To: End of Block If You can either choose to have €800 now or €1000 in 30 days. What would you choose? = €800 now

Q50 You can either choose to have €850 now or €1000 in 30 days. What would you choose?

o €850 now (1)

o €1000 in 30 days (2)

Skip To: End of Block If You can either choose to have €850 now or €1000 in 30 days. What would you choose? = €850 now

Q27 You can either choose to have €900 now or €1000 in 30 days. What would you choose?

o €900 now (1)

o €1000 in 30 days (2)

Skip To: End of Block If You can either choose to have €900 now or €1000 in 30 days. What would you choose? = €900 now

Q51 You can either choose to have €950 now or €1000 in 30 days. What would you choose?

o €950 now (1)

o €1000 in 30 days (2)

End of Block: Temporal Discounting

Start of Block: Test of Exploitation

Q38

Now we will ask you to consider a couple of choices and to answer as honestly as possible.

In this task we ask you to imagine that you have been randomly paired with another person, whom we will refer to simply as the "Other." This other person is someone you do not know and that you will not knowingly meet in the future. Both you and the "Other" person will be making choices by circling either the letter A, B, or C. Your own choices will produce points for both yourself and the "Other" person.

Likewise, the other's choice will produce points for him/her and for you. Every point has value: the more points you receive, the better for you, and the more points the "Other" receives, the better for him/her. Here's an example of how this task works:

You get/Other person gets

A	B	C
500/100	500/ 500	550/300

In this example, if you choose A you would receive 500 points and the other would receive 100 points; if you chose B, you would receive 500 points and the other 500; and if you chose C, you would receive 550 points and the other 300. So, you see that your choice influences both the number of points you receive and the number of points the other receives.

Before you begin making choices, please keep in mind that there are no right or wrong answers -- choose the option that you, for whatever reason, prefer most. Also, remember that the points have value: the more of them you accumulate the better for you. Likewise, from the "other's" point of view, the more points s/he accumulates, the better for him/her.

Q39 Pick which option you would choose

	480/80 (1)	540/280 (2)	480/480 (3)
You get/Other person gets (1)	○	○	○

Q40 Pick which option you would choose

	560/300 (1)	500/500 (2)	500/100 (3)
You get/Other person gets (1)	○	○	○

Q41 Pick which option you would choose

	520/520 (1)	520/120 (2)	580/320 (3)
You get/Other person gets (1)	○	○	○

Q42 Pick which option you would choose

	500/100 (1)	560/300 (2)	490/490 (3)
You get/Other person gets (1)	○	○	○

Q43 Pick which option you would choose

	560/300 (1)	500/500 (2)	490/90 (3)
You get/Other person gets (1)	○	○	○

Q44 Pick which option you would choose

	500/500 (1)	500/100 (2)	570/300 (3)
You get/Other person gets (1)	○	○	○

Q45 Pick which option you would choose

	510/510 (1)	560/300 (2)	510/110 (3)
You get/Other person gets (1)	○	○	○

Q60 Pick which option you would choose

	480/100 (1)	490/490 (2)	540/300 (3)
You get/Other person gets (1)	○	○	○

Q61 Pick which option you would choose

	550/300 (1)	500/100 (2)	500/500 (3)
You get/Other person gets (1)	○	○	○

End of Block: Test of Exploitation

Start of Block: Demographics

Q3 Age

_____

Q4 Gender

- o Male (1)
- o Female (2)
- o Choose not to answer (3)

Q5 Nationality

_____

Q12 Education Level

- o Primary School (1)
- o MIddle School (2)
- o High School (3)
- o Bachelors Degree (4)
- o Masters Degree (5)
- o Doctoral Degree (6)
- o Other/please specify (7) _____

Q58 If you are interested in receiving results from this study, please feel free to enter your email in the attached form.

https://forms.gle/S67PnDnPNaFgAj4T8

Q32 If there are any questions or concerns please feel free to write them below.

_____

Q59 Thank you so much for taking the time to participate in my study! This study was done in partial fulfillment of my MSc. in Management.

The study was designed to evaluate individuals' cognition and behavioral choices when faced with financial scarcity at different power levels. At the beginning of the survey the individual's current power level was measured. Then we measured whether we could influence the perception of scarcity by presenting a randomized article either talking about the positive or negative effects of job scarcity. Following this, we asked the individual about their financial state to see if it had an effect.

We explored the individual's cognition in the following raven matrices tests adding an element of time scarcity through the countdown clock. The following section explored how people plan for the future by presenting them with two monetary choices given a certain timeframe. Afterwards we examined the individual's behavior and whether or not, given the opportunity, their choice would be selfish given the opportunity to choose first.

End of Block: Demographics

Appendix B: Manipulation Check

Descriptive Statistics

Dependent Variable: How much do you fear for your financial future?

Scarcity	Mean	Std. Deviation	N
With Scarcity	3.83	1.340	70
Without Scarcity	3.71	1.322	66
Total	3.77	1.328	136

Tests of Between-Subjects Effects

Dependent Variable: How much do you fear for your financial future?

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.461[a]	1	.461	.260	.611	.002
Intercept	1931.64	1	1931.64	1089.97	.000	.891
Scarcity	.461	1	.461	.260	.611	.002
Error	237.473	134	1.772			
Total	2173.00	136				
Corrected Total	237.934	135				

a. R Squared = .002 (Adjusted R Squared = -.006)

Appendix C: ANOVA of Financial Scarcity & Power on Temporal Discounting

Correlations

		Scarcity	Tem_Tot	Power_Cat
Scarcity	Pearson Correlation	1	-.002	.091
	Sig. (2-tailed)		.979	.291
	N	136	135	136
Tem_Tot	Pearson Correlation	-.002	1	.014
	Sig. (2-tailed)	.979		.873
	N	135	135	135
Power_Cat	Pearson Correlation	.091	.014	1
	Sig. (2-tailed)	.291	.873	
	N	136	135	136

Tests of Between-Subjects Effects

Dependent VariableTem_Tot

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3.884[a]	3	1.295	.145	.933	.003
Intercept	9311.77	1	9311.77	1045.24	.000	.889
Scarcity	.106	1	.106	.012	.913	.000
Power_Cat	.355	1	.355	.040	.842	.000
Scarcity * Power_Cat	3.642	1	3.642	.409	.524	.003
Error	1167.05	131	8.909			
Total	10747.0	135				
Corrected Total	1170.93	134				

a. R Squared = .003 (Adjusted R Squared = -.020)

Appendix D: One-Way ANOVA of Financial Scarcity on Exploitative Behavior

ANOVA

Dependent VariableTot_Beh

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.001	1	.001	.029	.866
Within Groups	2.264	129	.018		
Total	2.264	130			

Appendix E: ANOVA of Financial Scarcity & Power on Exploitative Behavior

Tests of Between-Subjects Effects

Dependent VariableTot_Beh

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.011[a]	3	.004	.200	.896	.005
Intercept	519.353	1	519.353	29269.0	.000	.996
Scarcity	.000	1	.000	.008	.928	.000
Power_Cat	.007	1	.007	.402	.527	.003
Scarcity * Power_Cat	.003	1	.003	.196	.659	.002
Error	2.254	127	.018			
Total	528.433	131				
Corrected Total	2.264	130				

a. R Squared = .005 (Adjusted R Squared = -.019)

Correlations

		Scarcity	Power_ Cat	Tot_Beh
Scarcity	Pearson Correlation	1	.091	.015
	Sig. (2-tailed)		.291	.866
	N	136	136	131
Power_Cat	Pearson Correlation	.091	1	.055
	Sig. (2-tailed)	.291		.531
	N	136	136	131
Tot_Beh	Pearson Correlation	.015	.055	1
	Sig. (2-tailed)	.866	.531	
	N	131	131	131

Appendix F: Hayes Process Model 8

```
*************** PROCESS Procedure for SPSS Version 3.5.3 ***************

      Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
  Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 7
   Y  : Tem_Tot
   X  : Scarcity
   M  : WM_Tot
   W  : Pwr_Cat

Sample
Size:  135

**************************************************************************
OUTCOME VARIABLE:
 WM_Tot

Model Summary
        R      R-sq       MSE    F(HC4)       df1        df2          p
     .079      .006     1.014      .241     3.000    131.000      .868

Model
            coeff    se(HC4)          t          p       LLCI       ULCI
constant    2.579       .133     19.390       .000      2.316      2.842
Scarcity     .036       .133      .273       .786      -.227       .299
Pwr_Cat     -.097       .179     -.542       .589      -.451       .257
Int_1        .046       .179      .256       .799      -.308       .400

Product terms key:
 Int_1    :       Scarcity x       Pwr_Cat
```

Test(s) of highest order unconditional interaction(s):

	R2-chng	F(HC4)	df1	df2	p
X*W	.001	.065	1.000	131.000	.799

Focal predict: Scarcity (X)
Mod var: Pwr_Cat (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  Scarcity   Pwr_Cat    WM_Tot     .
BEGIN DATA.
    -1.000       .000      2.543
     1.000       .000      2.615
    -1.000      1.000      2.400
     1.000      1.000      2.564
END DATA.
GRAPH/SCATTERPLOT=
 Scarcity WITH     WM_Tot   BY       Pwr_Cat  .
```

****

OUTCOME VARIABLE:
Tem_Tot

Model Summary

R	R-sq	MSE	F(HC4)	df1	df2	p
.028	.001	8.864	.060	2.000	132.000	.942

Model

	coeff	se(HC4)	t	p	LLCI	ULCI
constant	8.629	.690	12.505	.000	7.264	9.994
Scarcity	-.002	.260	-.008	.994	-.516	.512
WM_Tot	-.082	.244	-.336	.737	-.565	.401

********** DIRECT AND INDIRECT EFFECTS OF X ON Y **********

Direct effect of X on Y

Effect	se(HC4)	t	p	LLCI	ULCI
-.002	.260	-.008	.994	-.516	.512

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
Scarcity -> WM_Tot -> Tem_Tot

Pwr_Cat	Effect	BootSE	BootLLCI	BootULCI
.000	-.003	.034	-.080	.070
1.000	-.007	.035	-.095	.054

Index of moderated mediation (difference between conditional indirect effects):

	Index	BootSE	BootLLCI	BootULCI
Pwr_Cat	-.004	.045	-.115	.080

********** BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS **********

OUTCOME VARIABLE:
WM_Tot

	Coeff	BootMean	BootSE	BootLLCI	BootULCI
constant	2.579	2.576	.133	2.313	2.836
Scarcity	.036	.037	.133	-.234	.294
Pwr_Cat	-.097	-.096	.179	-.440	.261
Int_1	.046	.045	.178	-.294	.404

OUTCOME VARIABLE:
Tem_Tot

	Coeff	BootMean	BootSE	BootLLCI	BootULCI
constant	8.629	8.640	.665	7.194	9.804
Scarcity	-.002	.004	.253	-.496	.500
WM_Tot	-.082	-.089	.235	-.534	.407

********** ANALYSIS NOTES AND ERRORS **********

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

NOTE: A heteroscedasticity consistent standard error and covariance matrix estimator was used.

------ END MATRIX -----