

RISK AVERSION IN THE PUBLIC SECTOR WORKFORCE:
THE MICRO-LEVEL DRIVERS OF CHANGE

by

PO CHIU IVAN LEE

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ABSTRACT OF THE DISSERTATION

Risk aversion in the public sector workforce:

The micro-level drivers of change

by Po Chiu Ivan Lee

Dissertation Directors:

Dr. Gregg Van Ryzin & Dr. Sebastian Jilke (Co-Chair)

For a long-time, public sector employees have been described as “pathologically” risk averse. Research suggests that a high level of risk aversion in the public sector workforce may lead to undesirable consequences such as hindering reforms and innovations. It is therefore important to understand the factors and mechanisms that could change the level of risk aversion in the public sector. Nevertheless, the scientific inquiry on this topic is limited.

This dissertation seeks to explore the mechanisms that may affect the level of risk aversion in the public sector workforce. It adopts the attraction-selection-attrition-socialization (ASAS) framework to examine two potential micro-level driving forces — namely job attraction effect and work socialization effect — that could affect the level of individuals’ risk aversion and thereby ultimately the public sector workforce.

The dissertation contains three empirical essays. The first essay uses the systematic review method to identify and evaluate 26 articles published in public administration and other disciplines. The second essay reports a multistage conjoint experiment to examine

whether more risk averse individuals are more attracted to the public sector, and whether job seekers consider a job's employment sector when making job decisions. The third essay uses the 2008-2018 dataset of the German Socio-Economic Panel Study (GSOEP) and conducts a longitudinal analysis to explore whether working longer in the public sector could make individuals become more risk averse over time.

The findings of the systematic review suggest that prior studies in this area did not clearly define the concept of risk and risk aversion, and that there is limited effort in exploring the antecedents of risk aversion. The findings of the conjoint experiment suggest that individuals high and low in risk aversion do not behave differently in choosing public sector employment, and they do not care about the employment sector when direct information about a job becomes available in the job search process. The findings of the longitudinal analysis partially support the hypothesis of a socialization effect. Depending on the length of a person's total work experience, working longer in the public sector work could increase his or her level of risk aversion over time. These findings provide important insights for future research.

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Chapter 1 - Introduction

Governments and their employees regularly need to choose between options that differ in the level of risk. For example, a financial manager of a municipal government may need to decide whether or not to issue municipal bonds and to choose between different public corporations for investment (Suzuki and Avellaneda 2018); an administrator of a human services program might need to choose between different case management software platforms despite uncertainty about the impact on case processing speed and average benefits on clients; at the front lines of service delivery, a team of child welfare workers might have to consider different options of interventions despite uncertainty about what is best for the well-being of a child. In general, the behavioral tendency of individuals to prefer options associated with a lower level of uncertainty over those associated with a higher level of uncertainty is referred to as *risk aversion* (Kahneman and Tversky 1979; Weber, Blais and Betz 2002).

For a long time, risk aversion has been described as a “pathological” characteristic of the public sector workforce (Tepe and Prokop 2018); indeed, the public sector has been often stereotyped as being full of employees who are highly risk averse (e.g., McIlroy 2019; Thatcher 2022). Although some scholars argue that having a group of highly risk averse public employees may help to guard the public interest under certain circumstances (e.g., Dong 2017), research suggests that a high level of risk aversion in the public sector workforce may lead to undesirable consequences, such as hindering the diffusion and adoption of innovations in public sector organizations (Borins 2001; De Vries, Bekkers, and Tummers 2016). Indeed, positive employee attitudes towards change and risk taking

is a good predictor of innovative behavior in the public sector (Damanpour 1991), which may eventually lead to an improvement in organizational efficiency and effectiveness (De Vries, Bekkers, and Tummers 2016). As such, it is important to understand the factors and mechanisms that could contribute to a higher (or lower) level of risk aversion in the public sector. Such an understanding can provide a foundation for exploring potential management tools and reform practices that help to manage the overall level of risk aversion among public employees.

The antecedents of risk aversion in the public sector workforce have only recently begun to receive more empirical attention. Some studies in this area have adopted a “public vs. private” perspective, focusing on examining *whether* public employees are more risk averse than their private, for-profit sector counterparts (e.g., Bellante and Link 1981; Bozeman and Kingsley 1998; Nicholson-Crotty, Nicholson-Crotty and Webeck 2019; Tepe and Prokop 2018). These studies contribute to the debate of New Public Management (NPM) reform, which generally assumes that individuals are risk neutral (Tepe and Prokop 2018; see also Miller and Whitford 2002; Miller, 2005; Miller and Whitford 2007) and that incentive schemes used in the private sector can induce public managers to be more entrepreneurial in their decision making (Nicholson-Crotty, Nicholson-Crotty and Webeck 2019). The findings of these studies shed insights on whether business practices should be transferred to the public sector. However, such a theoretical lens of public vs. private comparison provides limited insights into the factors that may affect the absolute level of risk aversion among employees in the public sector. Indeed, understanding the variation in the absolute level of risk aversion in the public sector workforce, as well as the causes of such variation, remains an important topic in its own right.

1.1 Research Purposes and Questions

Against this backdrop, this dissertation seeks to explore and examine the factors and mechanisms that may affect the level of risk aversion in the public sector workforce, with a specific focus on the micro-level drivers that may contribute to change over time. The main purpose of this dissertation is twofold. Theoretically, it seeks to situate the concept of risk aversion within the context of public administration, and on this basis, address conceptual issues in the study of risk aversion and to review how this concept has been studied in the public administration literature. Empirically, this dissertation seeks to examine the potential job attraction and work socialization effects (see the discussion on the theoretical framework below), which may shape the level of risk aversion in the public sector workforce over time. Three research questions guide this dissertation:

- 1) What is risk aversion? And how is it studied in the field of public administration?*
- 2) Are people with a higher level of risk aversion more attracted to public sector employment?*
- 3) Does working longer in the public sector make people become more risk averse?*

1.2 Theoretical Framework

This dissertation concerns the aggregate level of risk aversion of the public sector workforce, and it is closely related to the concept of individual risk aversion. In essence, workforce refers to a pool of employees. It is not the same as an organization, which is an organized body of people with particular organizational goals and observable structures (Rainey 2009, 20). Rather, a workforce is simply the aggregation of employees who

typically work for a set of organizations. Risk aversion of a workforce can be represented by the average level of risk aversion of employees within this workforce. This is not the same as individual- or organizational-level risk aversion, which are about individual or organizational preferences, and which can be derived from a series of choices made by individuals or organizations in risky choice situations.

Yet, the level of risk aversion of a workforce is directly related to the change in individuals' risk aversion. For example, if a certain proportion of current employees is affected by the working environments and becomes more risk-averse over time, then the workforce as a whole will have an increase in the level of risk aversion over time. Alternatively, when an increased number of highly risk averse people enter a workforce, then that workforce may also experience an increase in its level of risk aversion.

The attraction-selection-attrition-socialization (ASAS) framework developed by organizational behaviorists (e.g., Chatman 1991; De Cooman et al. 2009) helps to organize and predict the potential mechanisms which operate at the micro-level within organizations that could shape the level of risk aversion in the public sector workforce over time. The ASAS framework starts by assuming an influence of fit on the applicant's job choice behavior (self-selection) as well as on the organization's hiring decision (employer selection). People are differentially attracted to an organization based on various factors, including its organizational values, the typical personality of its members, or other work-related characteristics that fit their needs. At the same time, organizations will also select people who share their values or other desirable attributes. The outcome of these processes determines the types of employees in an organization. Over time, organizations tend toward homogeneity with regard to the type of employees (Dickson et al. 2008).

The ASAS framework further assumes that the processes of attrition and socialization operate jointly to shape an organization's work force (Chatman et al. 2008). Attrition refers to the process in which individuals who do not fit an organization will leave voluntarily or be asked to leave (De Cooman et al. 2009). Socialization refers to the process by which an individual comes to understand the values, abilities, expected behaviors, and social knowledge that are essential for assuming an organizational role and for participating as member of an organization. Effective socialization inspires individuals to think and act in accordance with organizational interests (Chatman 1991). In the long run, at an aggregate level both processes will lead to a homogeneous workforce.

Notably, the ASAS framework is not the same as the attraction-selection-attrition (ASA) framework suggested by Schneider (1987). The former is an interactional framework of which the central idea is that the "attraction-selection-attrition" processes (i.e., the influence of people) and the "socialization" process (i.e., the influence of organizations) operate jointly to shape an organization's work force (Chatman 1991; De Cooman et al. 2009). In contrast, the ASA framework is a person-based framework which emphasizes only the influence of people. As Schneider has mentioned in his 1995 paper: *"The ASA framework is person-based. It is person-based in the sense that the personality attributes of the people in a setting are seen as the fundamental defining characteristic of that setting. The ASA framework promotes the idea that the situation is not independent of the people in the setting; the situation is the people there behaving as they do. According to B. Schneider, structure, process, and culture are the outcome of the people in an organization, not the cause of the behavior of the organization."* (Schneider, Goldstein and Smith 1995, 751). In short, the ASAS and ASA frameworks can be viewed as two

different models that, in an important sense, represent two sides of the so-called Person-Situation Debate initiated by Mischel (1968).

The ASAS framework helps to predict why the level of risk aversion in the public sector workforce may change over time. First, it may be that people with a higher level of risk aversion are attracted to work in the public sector, leading to a long-run increase in the number of highly risk averse employees, and thus a higher level of risk aversion in the public workforce. This attraction effect may be caused by the fact that public sector employment is often treated as a “low-risk” option in career decisions due to its (presumed) organizational or job characteristics, such as a high level of job security and a behavior-oriented (rather than result-oriented) appraisal system. From this perspective, individuals with a higher level of risk aversion are thus likely to choose public sector employment. Second, it may also be that the working environment and experience in the public sector affect individuals’ attitude and traits over time. In the public sector work environments, employees are frequently reminded of their responsibilities, duties, and obligations, as well as be cautioned about the negative consequences associated with the violations of ethical and legal standards and principles. These factors could activate or consolidate the prevention focus orientation (Higgins 1997) of those working in the public sector, making them become unfavorable toward risk and uncertainty. This socialization effect may make public employees become more risk-averse over time, contributing to an increase in the level of risk aversion in the public sector workforce.

1.3 Overview of the Dissertation

This dissertation includes five chapters, including this introduction, the three main essays that make up the body of the dissertation, and a chapter of conclusions and implications. Multiple methods are adopted in the three main essays, including a systematic review, a conjoint and vignette survey experiment, and a longitudinal analysis of panel survey data. An outline of the dissertation, including the key research questions and methods, is provided in the Table 1 below.

Table 1.1. Overview of Dissertation

1. <u>Introduction</u> :	The importance of studying the change in risk aversion in the public sector workforce, the research questions, the theoretical framework, and an overview of the dissertation.
2. <u>Essay 1</u> :	Definitions, conceptual issues and a systematic review
<i>Research Questions</i> :	<ol style="list-style-type: none"> 1. What is/are the definition(s) of risk aversion in the study of public administration? 2. How does prior research in public administration operationalize and measure the concept of risk aversion? 3. What are the antecedents or underlying factors of risk aversion identified in the study of public administration?
<i>Research Methods</i> :	Systematic review
3. <u>Essay 2</u> :	Examining the potential of job attraction effect
<i>Research Questions</i> :	<ol style="list-style-type: none"> 1. Are job seekers with a higher level of risk aversion more likely to choose public sector employment than those with a lower level of risk aversion? 2. Do job seekers consider a job's employment sector (i.e., working for government instead of in the private, for-profit sector) when making job decisions?
<i>Research Methods</i> :	Survey experiment with a multi-stage conjoint design

<p>4. <u>Essay 3:</u></p> <p><i>Research Questions:</i></p> <p><i>Research Methods:</i></p>	<p>Exploring the pointel of work socialization effect</p> <p>1. Does working longer in the public sector make people become more risk averse?</p> <p>Longitudinal analysis using the German Socio-Economic Panel (GSOEP) data</p>
<p>5. <u>Conclusion and Implications:</u></p>	<p>Summary, research implications, contributions and future research</p>

Essay 1 (Chapter 2)

The first essay of this dissertation discusses the concept of risk aversion and uses the method of systematic review to review how this concept has been studied in the public administration literature. Although risk aversion appears frequently as a stereotypical description of bureaucratic behavior, it has only received limited systematic exploration in the field of public administration (Tepe and Prokop 2018). Indeed, many prior studies do not clearly define risk aversion, and there is a lack of conceptual clarity and consistency about the definition and operationalizations of the concept. Against this backdrop, Essay 1 addresses three research questions: 1) What is/are the definition(s) of risk aversion in public administration research? 2) How does prior research in public administration operationalize and measure the concept of risk aversion? 3) What are the antecedents or underlying factors of risk aversion identified in the study of public administration?

Essay 1 starts by reviewing how risk aversion is defined, measured, and studied across different fields of social science, including economics and psychology. Building on this base, the essay addresses the research questions by following the protocol of the

Preferred Reporting Items for Systematic Reviews and Meta analyses (PRISMA) to conduct a systematic literature review of 26 articles in public administration and other related fields. The findings suggest that more than half of the prior studies in this area did not clearly define the concept of risk and risk aversion. When operationalizing this concept, prior studies commonly relied on self-reports and direct observations of risk-taking behaviors. There is also limited knowledge about the antecedents or underlying factors of individuals' risk aversion among public sector employees.

Essay 2 (Chapter 3)

Public management scholars and economists have long proposed that people with a higher level of risk aversion are more attracted to work in government (Bellante and Link 1981; Bonin et al., 2007; Buurman et al. 2012; Dong 2017; Pfeifer 2011). This proposition of a job attraction effect, however, has not been adequately assessed. First, such a proposition has seldom been examined using experimental methods. Hence the prior studies were prone to the problems of confounding in observational studies. Second, such a proposition is built on the assumption that job seekers consider a job's employment sector (i.e., working for government instead of in the private, for-profit sector) when making job decisions. Yet, little study has tested whether this assumption holds true.

Using a multistage conjoint experimental design, Essay 2 examines 1) whether those with a higher level of risk aversion are more likely to choose public sector employment under different information conditions; 2) the relative importance of employment sector vis-à-vis other job-related attributes in job choices under different information conditions. The findings suggest that 1) there is no evidence showing that those

with a higher level of risk aversion behave differently than those with a lower level of risk aversion in job choices; 2) the employment sector only affects individuals' job choices in a low information environment. But once direct information about a job becomes available to prospective applicants, the importance of the employment sector for job choice decisions diminishes. Indeed, the employment sector only matters to job seekers when little direct job-related information is provided. These findings challenge the proposition of a job attraction effect.

Essay 3 (Chapter 4)

The attraction-selection-attrition-socialization (ASAS) framework implies that two potential driving forces, namely job attraction and work socialization, may affect the level of risk-aversion of the public sector workforce over time. While Essay 2 focuses on the first mechanism and examines the assumption of the job attraction effect, Essay 3 focuses on the second mechanism, seeking to explore whether individuals might become more risk averse over time after working in the public sector. Specifically, it addresses the following research question: *Does working (longer) in the public sector make people become more risk averse?*

Using the 2008-2018 datasets of the German Socio-Economic Panel Study (GSOEP), Essay 3 includes a longitudinal analysis that focuses on tracing the responses of those who did not have a full-time work experience in or before 2008 (n=472). It examines if the duration of their public sector work experience during 2009 to 2018 is associated with their individual level of risk aversion. The results of regression analyses and robustness test partially support the hypothesis of a socialization effect. While public sector

work experience *per se* does not affect the level of individuals' risk aversion when the influence of work experience is being controlled, it is found that the level of individuals' risk aversion could be affected by the interaction effect between work experience and public sector work experience. This means that depending on the length of a person's total work experience, working longer in the public sector work could increase his or her level of risk aversion over time. The longer a person works AND the longer this person works in the public sector, the more risk averse he or she could become

Conclusions and Implications (Chapter 5)

The findings of Essays 2 do not support the proposition of a job attraction of risk aversion, while the findings of Essay 3 partially support the proposition of a work socialization effect of risk aversion. The implications of these findings are discussed in the last chapter.

Chapter 2 – Individual Risk Aversion in the Public Sector: A Systematic Review

2.1 Introduction

For a long time, the term “risk averse” has been commonly used as an adjective to describe civil servants and those who work in the public sector. In public debates, politicians, political commentators, and policy analysts have treated risk aversion as a pathological characteristic of the public sector workforce that could produce “creeping crises” (McIlroy 2019). In academia, the assertion that “*the personnel of bureaucracies is largely constituted of those who value security above all else*” can be traced back to the early work of Cahen-Salvador in the 1920s (Cahen-Salvador 1926). The early socio-psychological approaches on bureaucratic agents (Merton 1940) and the politico-economic approaches toward bureaucracies (Downs 1967) also laid the presumption of risk-averse public employees.

However, despite being a common and long-standing description of public sector employees, individual risk aversion in the public sector has received limited scholarly attention (Tepe and Prokop 2018). Compared to other disciplines (e.g., applied and social psychology, economics, and management studies) where there is a sizeable number of studies examining and predicting risk-taking/risk aversion behaviors, the field of public administration has been studying this topic narrowly. Some studies in this area have adopted a “public vs. private” perspective, focusing on examining whether public employees are more risk-averse than their private, for-profit sector counterparts (e.g.,

Bellante and Link 1981; Bozeman and Kingsley, 1998; Nicholson-Crotty, Nicholson-Crotty and Webeck, 2019; Tepe and Prokop 2018). Nevertheless, there is little effort to address other questions, such as those about the definitions, operationalizations, and antecedents of individual risk aversion of public employees. This is also little effort to synthesize existing knowledge, which leads to a lack of understandings about the state of the art of the research of individual risk aversion in the public sector.

This essay seeks to review the concept of individual risk aversion and how it has been studied in public administration. Following the protocol of the Preferred Reporting Items for Systematic Reviews and Meta analyses (PRISMA), this essay systematically identifies and reviews 26 articles in public administration and other related fields. It addresses three basic questions: 1) What is/are the definition(s) of risk aversion in public administration research? 2) How does prior research in public administration operationalize and measure the concept of risk aversion? 3) What are the antecedents or underlying factors of risk aversion identified in the study of public administration? In the following section, this essay starts by discussing how risk aversion is being defined, measured, and studied across different fields of social sciences, including Economics, Psychology, Finance, and Management. Based on these discussions, the research questions considering the research in public administration are set up. Then, the essay will describe the steps of the systematic review following the PRISMA protocol. After that, the findings of the systematic review will be presented. Their implications will be discussed in the conclusion.

2.2 The Question about Definition and Conceptualization

The concepts of risk and risk-aversion have received substantial attention across the social sciences—for many, they play an important role in understanding and predicting human behaviors (e.g., Figner and Weber 2011; Lilleholt 2019; Weber 2010). Yet, the terms “risk” and “risk aversion” have been used in different and sometimes inconsistent ways across (and even within) academic disciplines. There are at least two divergences in the conceptualization of these terms.

Uncertainty vs. Chance of Loss

In colloquial talk, the term “risk” is typically referred only to the chance of having negative outcomes (Baird and Thomas 1985; Levitt and March 1988); Someone is said to be “risk averse” if they are disinclined to pursue actions that have a non-negligible chance of resulting in a loss (Stefansson and Bradley 2019) – that is, a negative consequence that causes harms to ones’ wellbeing. Following this colloquial understanding, some Management and Policy Science studies define risk as the exposure to the chance of loss from one’s actions or decisions (Fischhoff, Watson and Hope 1984; MaCrimmon and Wehrung 1986, Yates and Stone 1992; see also Bozeman and Kingsley 1998).

However, in other disciplines such as Applied and Social Psychology, Organizational Behavior, Economics, and Finance, risk is typically referred to as “uncertainty”, and the concept of “loss” is not necessarily involved in its conceptualization (e.g., Charness, Gneezy, and Imas 2013). For instance, Sitkin and Pablo (1992, 10) define risk as “*the extent to which there is uncertainty about whether potentially significant and/or*

disappointing outcomes of decisions will be realized”. In their conceptualization, risk is a characteristic associated with decisions that can be applied to a full range of outcomes, including both positive and negative ones (ibid, 11). Besides, Finger and Weber (2011, 211) suggest that *“formally more important, however, is that the riskier options involve greater uncertainty about the resulting outcome: The term risk taking refers to choosing the option with the higher outcome variability—that is, with the wider range of possible outcomes. None of these outcomes need to be negative.”*

Depending on the context in which a study is conducted, the concept of risk can either be understood as “chance of loss” or “uncertainty”. Similarly, the term “risk aversion” can either be understood as the inclination to avoiding (the chance of) loss, or the inclination to avoiding uncertainty. Hence, I first ask how the concepts of risk and risk-aversion have been defined in the field of public administration?

Research Question (1a): What is/are the definition(s) of risk aversion in public administration research? — Does it be defined as the aversion to the chance of loss or the aversion to uncertainty?

Risk Attitude (Trait) vs. Risk Preference (State)

In general, the term “risk aversion” can be referred to as a tendency or propensity of individuals to prefer options associated with a lower level of uncertainty (and/or loss) over those associated with a higher level of uncertainty (and/or loss) (Kahneman and Tversky 1979; Weber, Blais and Betz 2002). This behavioral tendency occurs under “risky

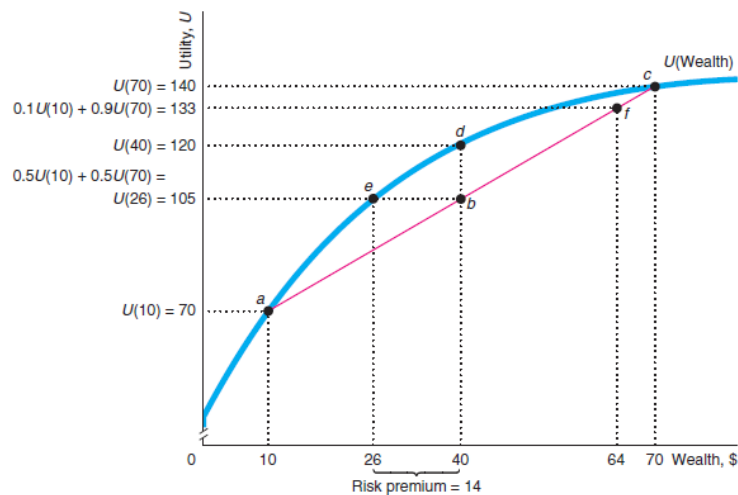
choice” situations where individuals encounter two or more alternatives (i.e., courses of action) which are different in terms of their outcome variability— that is, the number of possible outcomes associated with an option, and the probability that these outcomes will occur. However, there is a divergence about the nature of this behavioral tendency — it could either be understood as a trait or a state.

In the expected utility framework (Von Neumann and Morgenstern 1944), neoclassical economists assume that there is a single overall parameter, namely “risk attitude”, which could sufficiently characterize an individuals’ risk preferences across different domains including financial investments, health issues and job-related risks (Schildberg-Hörisch 2018). Such a risk attitude concerns a person’s degree of favorability or unfavourability toward uncertainty *per se*. It is typically understood as being related to the shape of the ones’ utility function – a personal trait that is assumed to remain stable overtime (Schildberg-Hörisch 2018). A person’s risk attitude describes the shape of his or her utility function (derived from a series of risky choices) for the outcomes in question, and the terms “risk averse” and “risk seeking” (or “risk loving”) technically refers to the curvature of the utility function (Weber, Blais and Betz 2002). A risk averse person has a utility function that is concave to the X axis (e.g., the wealth axis). This indicates that he or she has a diminishing marginal utility of wealth — that is, his or her utility increases with wealth but at a diminishing rate (Perloff 2014). It is predicted that a person whose utility function is concave picks the less risky choice if both choices have the same expected value. For instance, a risk averse person will dis-prefer a gamble yielding either \$0 or \$100 with equal probability to getting \$50 for sure (Stefansson and Bradley 2019). A person is said to be more risk averse if he or she has a more concave utility function or

demands a large amount of “risk premium” — that is the amount needed to make a person indifferent between the sure and unsure outcomes. On the other hand, a “risk-seeker” or a risk-lover” has a convex utility function, while someone who is risk neutral has a constant marginal utility of wealth (Perloff 2014).

Figure 2.1: Risk Aversion and the Shape of Utility Function

Initially, Irma's wealth is 40, so her utility is $U(40) = 120$, at point d . If she buys the stock and it's worth 70, her utility is $U(70) = 140$ at point c . If she buys the stock and it's worth only 10, she is at point a , where $U(10) = 70$. If her subjective probability that the stock will be worth 70 is 50%, the expected value of the stock is $40 = (0.5 \times 10) + (0.5 \times 70)$ and her expected utility from buying the stock is $0.5U(10) + 0.5U(70) = 105$, at point b , which is the midpoint of the line between the good outcome, point c , and the bad outcome, point a . Thus, her expected utility from buying the stock, 105, is less than her utility from having a certain wealth of 40, $U(40) = 120$, so she does not buy the stock. In contrast, if Irma's subjective probability that the stock will be worth 70 is 90%, her expected utility from buying the stock is $0.1U(10) + 0.9U(70) = 133$, point f , which is more than her utility with a certain wealth of 40, $U(40) = 120$, at d , so she buys the stock.



(This figure is adopted from Perloff 2014, 569)

More recently, however, some researchers have suggested that the risk preferences of individuals are not simply the function of ones' risk attitude (i.e., the shape of their utility function). Rather, there is a variety of factors that can affect individuals' decision-making under risky choice situations. For example, in the risk–return framework of risky choice

used in finance (Sarin and Weber 1993) and the related psychological risk–return model (Weber 1997, 1998), individuals’ risk preferences are treated as a function of:

$$\text{Preference (X)} = a (\text{Expected Benefit(X)}) + b (\text{Perceived Risk(X)}) + c \quad (1)$$

In this decomposition of preferences, the coefficient b represents risk attitude, which is always negative (Weber and Milliman 1997) and just one of the factors affecting individuals’ preferences. Risk preferences are also determined by how the decision makers perceive the riskiness (the probability that an outcome will occur) and the value of benefit (or loss) associated with the options. These perceptions of riskiness and benefit are different across individuals and groups as well as contents and contexts. They could be affected by long-term factors such as culture, institutional environments or situational differences such as outcome framing (Schwartz and Hasnain 2002; Weber, Blais and Betz 2002). Under this model, the risk preferences of individuals, and hence the behavioral tendency of risk aversion, are not simply the reflection of individuals’ traits. Rather, they are the state of individuals which are influenced by both personal predispositions, external, and situational factors.

Drawing on these differences in the conceptualization of risk preference and risk-aversion, a research question for the field of public administration is set up:

Research Question (1b): What is/are the definition(s) of risk aversion in public administration research? — Can it be understood as a personality trait or a state?

2.3 The Question about Measurement

Multiple methods have been used in different disciplines to measure the risk attitude or risk preferences of individuals. Three approaches prevail: self-reports, incentivized experiments, and direct measurement of risk behaviors.

The self-report method has been widely used to measure individuals' risk attitude, which is often treated as a form of personality trait. An example of a self-reported measure of risk attitude is a question in the German Socio-Economic Panel: *"How do you see yourself: are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?"* (11-point Likert scale; Wagner, Frick, and Schupp 2007). Dohmen et al. (2011) documented that this self-reported risk attitude is a reliable predictor of investment in stocks, self-employment, smoking, sports, and actual risk-taking in incentivized lottery experiments. They found correlations of about 0.5 across different risk domains, as well as for general risk attitude and domain-specific ones.

Another method is the use of experimental measures to observe real choices of individuals under well-controlled conditions (Schildberg-Hörisch 2018). In these experiments, individuals are typically provided with real incentives and asked to choose between different two-outcome options in which higher expected payoffs come at the cost of a higher variance of payoff. The aim of this approach is to elicit individuals' overall risk attribute through the observation of a series of risky choices. Some of the most widely used experimental approaches include Holt and Laury's (2002) price list approach, Gneezy and Potters' (1997) risky investment task, as well as Eckel and Grossman's (2002) choice between different gambles.

Figure 2.2: Eckel and Grossman's (2002) Measure

Choice (50/50 Gamble)	Low payoff	High payoff	Expected return	Standard deviation	Implied CRRA range
Gamble 1	28	28	28	0	$3.46 < r$
Gamble 2	24	36	30	6	$1.16 < r < 3.46$
Gamble 3	20	44	32	12	$0.71 < r < 1.16$
Gamble 4	16	52	34	18	$0.50 < r < 0.71$
Gamble 5	12	60	36	24	$0 < r < 0.50$
Gamble 6	2	70	36	34	$R < 0$

Note: The Eckel and Grossman's method of measuring risk preferences asks subjects to make only one choice; participants are presented with a number of gambles and are asked to choose one that they would like to play.

The third method is the direct measurement of risk behaviors/decisions. In this method, researchers pre-define what a risk-taking (or risk-averse) behavior is based on prior research, the result of pilot study, interviews or focus groups, or their own judgment. Then, they measure the behavior via self-administrated survey or direct observation of behaviors in the real world, or in the context of hypothetical scenarios. Examples of risk-taking behavior include substance abuse, heavy alcohol consumption, unprotected sexual intercourse, reckless driving, or extreme sports (Ben-Ari and Vera Skvirsky 2019). Examples of risk-aversion behavior include saving (Karni 1982), or buying insurance (Eling, Omid Ghavibazoo and Hanewald 2021). Notably, those who engage in risk-taking (or risk-aversion) behaviors do not necessarily treat themselves as taking risks (or being risk-averse). Instead, the outside observers define the risk level of these behaviors, and risk level prescribed by the outside observers does not necessarily match the risk level perceived by the decision-makers themselves. For example, Brockhaus (1982) suggested that entrepreneurs appear to be willing to take great risks. However, when differences in

risk perception are factored out, entrepreneurs demonstrate a preference for tasks that are only moderate in risk.

Drawing on the prior research in other disciplines, a research question for the field of public administration is set up:

Research Question (2): How does prior research in public administration operationalize and measure the concept of risk aversion?

2.4 The Question about Antecedents/Underlying Factors

For a long time, neoclassical economists assume that individuals' risk attitude, and hereby their propensity of choosing riskier options, is constant overtime. A standard approach in economics is to attribute any changes in measured risk attitude to measurement error or to consider them as meaningless noise (Schildberg-Hörisch 2018). Following this assumption, it is argued that individuals' risk attitude is related to their inborn biological characteristics, such as their cognitive ability and intelligence (Benjamin, Brown and Shapiro 2013; Dohmen, Falk, Huffman and Sunde 2018; Lilleholt 2019). Some studies have also investigated the relationship between individuals' risk aversion and their pathological conditions such as anxiety (Charpentier, Aylward, Roiser and Robinson 2017).

More recently, however, research has started to challenge the stability assumption of risk attitude in neoclassical economic theory. A growing number of studies seek to explore the external factors that may systematically affect individuals' risk attitude overtime (Schildberg-Hörisch 2018). For example, empirical evidence shows that

individual risk attitude is affected by individual life cycles: when people get older, they become less willing to take risks (Levin, Hart, Weller, and Harshman 2007; Moreira, Matsushita, and Da Silva 2010; Paulsen, Platt, Huettel, and Brannon 2011). Specifically, Dohmen et al. (2017) find that the willingness to take risks decreases linearly from early adulthood until approximately age 65. Besides, studies show that individual risk attitude is affected by continuously changing macroeconomic conditions. In general, individuals are substantially more willing to take risks during periods of economic growth and become more risk averse during recession periods (Buccioli and Miniaci 2018). Moreover, a related stream of studies found that exogenous shocks such as economic crises, violent conflicts, or natural catastrophes could significantly affect individual risk attitude (Dohmen, Lehmann, and Pignatti 2016; Gerrans, Faff, and Hartnett 2015). These events tend to make people become more risk averse. Finally, a growing body of research studies has shown that individual risk attitude is subject to the influence of temporary variations in psychological factors including individual's self-control resources, emotions, and stress (Fudenberg 2011; Fudenberg, Levine, and Maniadi 2014; Cohn, Englemann, Fehr, and Maréchal 2015). For instance, in an experiment of Guiso, Sapienza, and Zingales (2018), the participants were asked to watch a horror movie before indicating their preferences in a hypothetical risky lottery question. The results showed that, on average, the treated subjects have a 26 percent higher risk premium than the untreated ones.

What factors have been identified in the field of public administration that could affect or determine the level of risk aversion of individuals? Drawing on discussion above, a final research question is set up:

Research Question (3): What are the antecedents or underlying factors of risk aversion identified in the study of public administration?

2.5 Method

A systematic review is conducted to examine the above research questions. The systematic review method uses a pre-determined systematic process to review the state of the art for a specific body of research. By creating concise summaries of existing evidence and research, systematic reviews provide reliable insights for communities of both practice and research (Liberati et al. 2009). This study adheres to the requirements of the PRISMA checklist. The pre-determined items are reported as follows.

Eligibility Criteria

Studies are included in this systematic review if they meet all the following criteria:

Topic and unit of analysis: This review focuses on the research about individuals' risk aversion and related concepts in public administration (see the keywords in the search strategy below). It includes studies considering about individuals' "aversion to uncertainty" and their "aversion to the chance of loss"; it includes studies examining individuals' trait and/or state; it includes studies that treat risk-aversion and its related concepts either as a dependent variable or an independent variable; it includes studies not only published in the academic field of public administration, but also those published in other disciplines which involves the investigation of individuals in the public sector.

Notably, some seemingly relevant studies are excluded from this review during the third step of the selection process (i.e., records screened on abstract and/or full article). First, the studies about risk management, as well as those about entrepreneurship or innovation, which do not directly address individuals' risk aversion or its related concepts, are excluded. Second, this review is about individuals working in the public sector. It excludes studies of which the unit of analysis is organizations. In other words, it does not consider studies which examine behaviors, decisions, or characteristics of organizations. A study which has an individual-level unit of analysis, but concerns an organizational phenomenon, is also excluded from this review. For example, the study of Bozeman and Kingsley (1998), which collected data via questionnaire in the individual level but concerns organizational risk culture, is not included in this review. Finally, studies about the risk attitude/preferences of citizens (e.g., Baekgaard 2017) or private sector workers are excluded.

Study design: Only empirical studies (both quantitative and qualitative) were eligible. All kinds of research designs were included (case studies, questionnaires, experiments, etc.). Conceptual papers without empirical investigations or literature review reports are excluded from this review.

Language: This review only includes study written in English.

Publication status: This review only includes peer-reviewed journal articles (including online-first articles). Conference proceeding papers or book chapters are excluded.

Year of publication: This study focuses on reviewing articles in the last 3 decades. The selected records are between 1980 and 2021 (until June).

Search Strategy

Two search strategies were used. First, the “Scopus” electronic database was searched to identify relevant studies. Based on Lilleholt (2019), the following keywords were used in the first search field: “risk avers*” or “loss avers*” or “prospect theory” or “expected utility” or “risk toleran*” or “risk preference*” or “risk neutral” or “risk attitude*” or “risk taking” or “risk behavior*”. In the second search field, the following keywords were used: “public admin*” OR “government*” OR “public sector*” OR “public organization*” OR “public employee*” OR “public manage*” OR “public worker*”. This search strategy generated a total of 2425 document results. The exact search string used for Scopus is:

```
( TITLE-ABS-KEY ( "risk avers*" OR "loss avers*" OR "prospect theory" OR "expected utility" OR "risk toleran*" OR "risk preference*" OR "risk neutral" OR "risk attitude*" OR "risk taking" OR "risk behavior*" ) AND TITLE-ABS-KEY ( "public admin*" OR "government*" OR "public sector*" OR "public organization*" OR "public employee*" OR "public manage*" OR "public worker*" ) ) AND PUBYEAR > 1979 AND PUBYEAR < 2022 AND ( LIMIT-TO ( DOCTYPE , "ar" ) OR LIMIT-TO ( DOCTYPE , "ch" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) )
```

Second, the reference lists of a part of the articles which were found by the search strategy and were published in public administration journals (e.g., Public Administration Review, Journal of Public administration Research and Theory, Public Administration, Public Management Review) were checked. This search strategy resulted in 4 additional records.

Record Selection

After screening the titles and abstracts of the 2429 records identified, it was found that only 108 records were seemingly more relevant to the research of individual risk aversion in the public sector. After scrutinizing the abstract and/or full article of these records, it was found that only 26 of them are eligible for inclusion.¹ Figure 2.1 visualizes the selection process.

Coding

The identified studies were coded based on the research questions discussed above. The review ended up with four themes. Specifically, they include 1) Definition (a) — “loss”, “uncertainty”, “other, specify”, or “not defined/discussed”; 2) Definition (b) — “trait”, “state”, “both”, “other, specify”, or “not defined/discussed”; 3) Measurement — “self-reports”, “incentivized experiments”, “direct measurements”, “other, specify”, or “not mentioned”; and 4) Antecedents — “specify” or “not examined”.

2.6 Result

The information of the 26 articles included in this review, including their authors, title, year of publication, and the source title, is listed in Table 2.1 below. Twelve of them were published in public administration journals, while the others were published in different other disciplines. All of them include an empirical quantitative research design.

¹ A large portion of studies within these 108 records are related to organizational level analysis. They were thus excluded from the review.

Figure 2.3: Selection Process

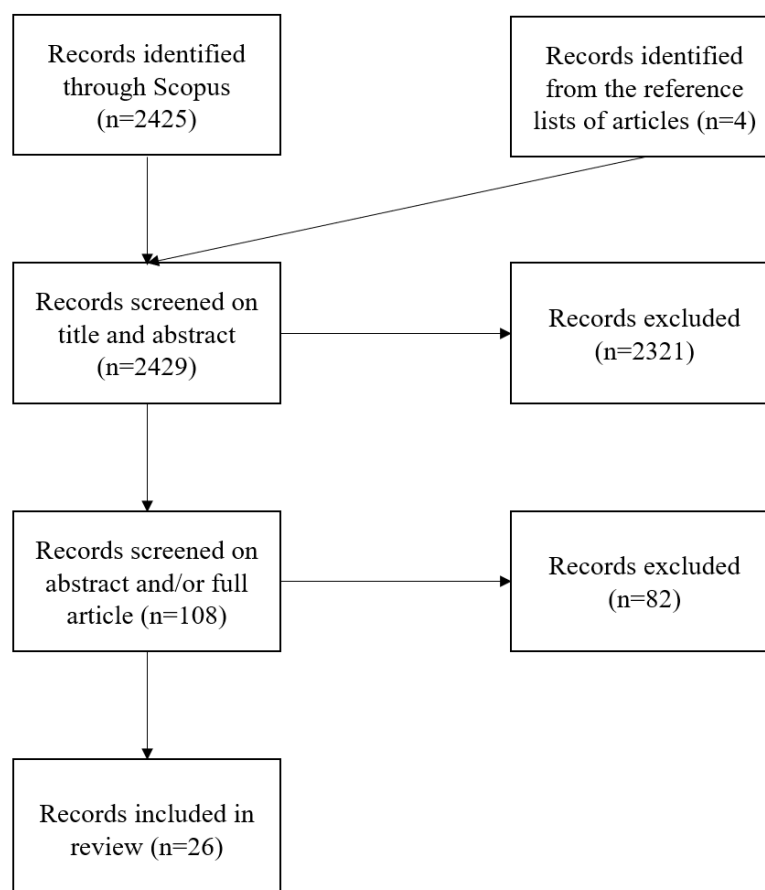


Table 2.1: Articles Included in the Systematic Review

#	Authors	Title	Year	Source title
1	Ng, P.Y., Clercq, D.D.	Explaining the entrepreneurial intentions of employees: The roles of societal norms, work-related creativity and personal resources	2021	International Small Business Journal: Researching Entrepreneurship
2	Weißmüller, K.S.	Publicness and micro-level risk behaviour: experimental evidence on stereotypical discounting behaviour	2021	Public Management Review
3	Scott, A., Holte, J.H., Witt, J.	Preferences of physicians for public and private sector work	2020	Human Resources for Health

4	Clark, R.L., Mitchell, O.S.	Target Date Defaults in a Public Sector Retirement Saving Plan	2020	Southern Economic Journal
5	Ayaita, A., Güla, F., Yang, P.	Where Does the Good Shepherd Go? Civic Virtue and Sorting into Public Sector Employment	2019	German Economic Review
6	Roberts, P.S., Wernstedt, K.	Decision Biases and Heuristics Among Emergency Managers: Just Like the Public They Manage For?	2019	American Review of Public Administration
7	Nicholson-Crotty, S; Nicholson-Crotty, J; Webeck, S.	Are public managers more risk averse? Framing effects and status quo bias across the sectors	2019	Journal of Behavioral Public Administration
8	Aqli, Z., Ujianto, Syafi'i, A.	Public employees' risk aversion and organizational citizenship behavior: The effects of ethical leadership, work culture and public service motivation	2019	Public Administration Issues
9	Anandari, A., Nuryakin, C.	The effect of risk preference on choice between public and private sector employment in indonesia	2019	International Journal of Business and Society
10	Bellé, N., Cantarelli, P., Belardinelli, P.	Prospect Theory Goes Public: Experimental Evidence on Cognitive Biases in Public Policy and Management Decisions	2018	Public Administration Review
11	Tepe, M., Prokop, C.	Are future bureaucrats more risk averse? The effect of studying public administration and PSM on risk preferences	2018	Journal of Public Administration Research and Theory
12	Sumadilaga, D.H., Soetjipto, B.W., Wahyuni, S., Wijanto, S.H.	The Influences of Perceived Managerial Discretion and Risk-Taking Behavior on Government Organizational Performance	2017	International Journal of Public Administration
13	Mat Ludin, K.R., Mohamed, Z.M., Mohd-Saleh, N.	The association between CEO characteristics, internal audit quality and risk-management implementation in the public sector	2017	Risk Management
14	Keddell, E.	Comparing Risk-Averse and Risk-Friendly Practitioners in Child Welfare Decision-Making: A Mixed Methods Study	2017	Journal of Social Work Practice
15	Liu, X., Stoutenborough, J., Vedlitz, A.	Bureaucratic expertise, overconfidence, and policy choice	2017	Governance
16	Dong, H.-K.D.	Individual Risk Preference and Sector Choice: Are Risk-Averse Individuals More Likely to Choose Careers in the Public Sector?	2017	Administration and Society

17	Buurman, M., Delfgaauw, J., Dur, R., Van den Bossche, S.	Public sector employees: Risk averse and altruistic?	2012	Journal of Economic Behavior and Organization
18	Wilson, R.S., Winter, P.L., Maguire, L.A., Ascher, T.	Managing wildfire events: Risk-based decision making among a group of federal fire managers	2011	Risk Analysis
19	Pfeifer, C.	Risk Aversion and Sorting into Public Sector Employment	2011	German Economic Review
20	Feeney, M.K., DeHart-Davis, L.	Bureaucracy and public employee behavior: A case of local government	2009	Review of Public Personnel Administration
21	Roszkowski, M.J., Grable, J.E.	Evidence of lower risk tolerance among public sector employees in their personal financial matters	2009	Journal of Occupational and Organizational Psychology
22	Nutt, P. C.	Comparing Public and Private Sector Decision-Making Practices	2006	Journal of Public Administration Research and Theory
23	McCue, C.P.	The risk-return paradox in local government investing	2000	Public Budgeting and Finance
24	Grinyer, A., Singleton, V.	Sickness absence as risk-taking behaviour: A study of organisational and cultural factors in the public sector	2000	Health, Risk and Society
25	Tucker, I.B.	Entrepreneurs and public-sector employees: The role of achievement motivation and risk in occupational choice	1988	Journal of Economic Education
26	Bellante, D., and A. N. Link.	Are Public Sector Workers More Risk Averse than Private Sector Workers?	1981	Industrial and Labor Relations Review

About Definition and Conceptualization

Table 2.2 below shows the systematic review results related to the first research question concerning about the issues of definition and conceptualization. As shown in the table, more than half of the articles included in this review did not provide a detailed definition of the concepts of risk or risk aversion: 15 out of 26 articles did not explain

whether risk is understood as “uncertainty” or as “the chance of loss”; 17 out of 26 articles did not explain whether risk aversion is understood as a trait or as a state.

8 out of 26, as compared to 3 out of 26 of the articles, conceptualized “risk” as “uncertainty” rather than “the chance of loss”. This conceptualization is different from the usage in colloquial talk but is consistent with what is being used in mainstream economic studies.

7 out of 26, as compared to 2 out of 26 of the articles, conceptualized risk aversion (or similar concepts such as risk tolerance or risk propensity) as an individual state rather than a personality trait. These studies suggested that risk aversion is a not only determined by ones’ inherent trait but also affected by a set of factors varied across contexts.

Table 2.2: Systematic Review Results about Definition and Conceptualization

Description	Number of Articles (out of 26)	Example
Conceptualizing “risk” mainly as “uncertainty”	8	#11 Tepe and Prokop (2018): <i>“We consider the decision-making process under risk as a function of the probability of an event and its positive and negative consequences for the decision maker’s payoff.” (p.183)</i>
Conceptualizing “risk” mainly as “(the chance of) loss”	3	#25 Tucker (1998) <i>“In order to quantify the degree to which respondents have a preference for avoiding risk, the PSID analysts devised an eight-question test based on personal decisions involving possible adverse consequences to the respondent’s assets or health.” (P.263)</i>

No relevant discussion	15	
Description	Number of Articles (out of 26)	Example
Conceptualizing “risk aversion” mainly as a “trait”	2	#16 Dong (2017): <i>“Individuals’ attitude toward risk is a critical dimension of personality which explains why people behave differently under different levels of risk.” (p.1122)</i>
Conceptualizing “risk aversion” mainly as a “state”	7	#2 Weißmüller (2021): <i>“Individuals’ risk propensity – i.e. their tendency to seek or shun risk based on their interpretation of the perceived probabilities of entry for specific choice outcomes – is not an inherent and absolutely stable characteristic but it is strongly influenced by context.” (p. 3)</i>
No relevant discussion	17	

About Measurement

Table 2.3 below shows the systematic review results related to second research question. As shown in the table, the direct measurement of risk taking/risk aversion behaviors/decisions in the real world or hypothetical settings is the most popular method of measurement. The self-report method, which asks participants to indicate their risk attitude or risk perceptions, is also widely used in public administration studies. Yet, incentivized experiments, a method that is widely used in the field of economics aiming at eliciting risk attitude/risk preferences under a controlled setting, was only used by one study in this body of research. Two out of 26 articles have adopted more than one method to measure individual risk attitude/preference.

Table 2.3: Systematic Review Results about Measurement

Description	Number of Articles (out of 26)	Example
Self-reports	12	#5 Ayaita, Güral and Yang (2019)
incentivized experiments	1	#11 Tepe and Prokop (2018)
Direct measurement	13	#6 Roberts and Wernstedt (2019)
More than 1 method	2	#11 Tepe and Prokop (2018): Self-Report + incentivized experiments #21 Roszkowski and Grable (2009): Self-Report + Direct measurement

About Antecedents

Table 2.4 below shows the systematic review results related to the third research question. As shown in the table, gain/loss framing and public/private difference (i.e., working in public vs. private sector/ studying public administration vs. studying business or law) are the most investigated factors in public administration studies. The studies exploring the influence of gain/loss framing typically examine how individuals' risk preferences are different under gain or loss domains, while the studies exploring the influence of public/private differences usually explores whether public sector employees (or those who are studying public administration in university) are more risk-averse than their private counterparts. In addition to these two factors, this review also identified a limited number of studies exploring the external/environmental or internal/personal factors that would affect the risk attitude or risk preferences of individuals. Examples of the

external factors include Ethical leadership, work culture, perceived managerial discretion and perceived red tape; examples of internal factors include overconfidence and PSM.

Table 2.4: Systematic Review Results about Antecedents

Description	Number of Articles (out of 26)	Example
Gain/Loss framing	6	#6 Roberts and Wernstedt (2019)
Public/Private difference	6	#17 Buurman, Delfgaauw, Dur and Van den (2012)
External factors	4	#8 Aqli, Ujianto and Syafi'I (2019): Ethical leadership, Work culture #11 Tepe and Prokop (2018): Low/high stake (in experiment) #12 Sumadilaga, Soetjipto, Wahyuni and Wijanto (2017): Perceived managerial discretion #20 Feeney and DeHart-Davis (2009): Perceived workplace bureaucratization, Perceived formalization, Perceived red tape, Perceived centralization
Personal factors:	4	#8 Aqli, Ujianto and Syafi'I (2019): PSM #15 Liu, Stoutenborough and Vedlitz (2017): Overconfidence #17 Buurman, Delfgaauw, Dur and Van den (2012): Work experience #18 Wilson, Winter, Maguire and Ascher (2011): Risk attitude (affecting risk behavior); Work experience
No examination	12	

*The counts are not mutually exclusive. This means that one article can study two antecedents at the same time.

2.7 Discussion

Despite being a common and long-standing description of public sector employees, individual risk aversion in the public sector has received limited scholarly attention (Tepe and Prokop 2018). This essay develops research questions based on prior studies in other related disciplines and systematically reviews 26 studies on individual risk aversion published in public administration and other related fields. The results of this review uncover several weaknesses in this body of research.

First, more than half of the studies did not clearly define the concepts of risk or risk aversion. It is therefore unclear whether these studies referred to risk as “uncertainty” or as “the chance of loss”; it is also unclear whether these studies treated the behavioral tendency of risk-taking/risk-aversion as a state or as a trait. Such a conceptual ambiguity is accompanied by the fact that studies in this area have adopted multiple approaches (e.g., self-reports, incentivized experiments, direct measurement) and used different instruments to measure risk attitude/risk preferences. These two issues together lead to a problem that studies sharing the umbrella term “risk aversion” or “risk-taking” may indeed look at different phenomena and hence their findings cannot be directly compared. Future research should take into account the multi-faceted nature of the conceptualization of risk aversion and carefully select the appropriate method of measurement.

Second, this body of research relies heavily on the self-report method to measure individuals’ risk preferences. Only one study (i.e., Tepe and Prokop 2018) adopted the

incentivized experimental approach to elicit individual risk preferences under a control environment. Although the self-report measure does arguably have a strong predictive validity (i.e., whether the measure has predictive power for actual risky behaviors; Dohmen et al. 2011), such an approach, which usually rely on single-item measurement, is prone to measurement error (Schildberg-Hörisch 2018). The self-report survey measure might also capture individuals' perceptions on other factors on top of their risk preferences. In contrast, economists consider experiments as the methodological gold standard for measuring risk preferences since experiments observe real choices with real incentives in well-controlled decision situations that are comparable across individuals. Future research in this area may consider the use of an experimental approach to improve the internal validity of studies.

Third, the review result shows that an increasing number of studies in this area has treated risk aversion as an individual "state" rather than a "trait". In particular, it is argued that individuals' tendency to seek or avoid risk is not an inherent and absolutely stable characteristic. Rather, it is strongly influenced by context and how individuals interpret the perceived probabilities of entry for specific choice outcomes (Weißmüller 2021). This theoretical perspective is in line with recent development in Economics where there is a rapidly growing body of research which has investigated factors in the decision environment that go beyond prices and constraints, and which might cause systematic but temporary deviations from underlying "baseline risk preferences" (Schildberg-Hörisch 2018). However, the empirical efforts in public administration studies are lagging. Only a limited number of factors have been identified and tested to check if they can affect individuals' risk preferences. Future research may take this theoretical perspective and further develop its empirical underpinnings.

This dissertation partially addresses some of these shortcomings. The first one is addressed since all empirical essays of this dissertation provide a discussion of the definition of risk aversion. The second one is partially addressed since, instead of relying on a single self-report measure, Essay 3 uses the hypothetical lottery choice task developed by Falk et al. 2018 to elicit risk preferences of participants. The third shortcoming is addressed since this dissertation involves examinations of the factors that may affect the level of individuals' risk aversion (Essay 3), or the factors that may affect the decisions of risk averse individuals (Essay 2).

Chapter 3 – Attraction to the Public Sector: A Conjoint Study of the Job Search Process

3.1 Introduction

Over the past decades, public management scholars and economists have proposed that people with a higher level of risk aversion are more attracted to work in government (Bellante and Link 1981; Bonin et al., 2007; Buurman et al. 2012; Dong 2017; Pfeifer 2011). This proposition of job attraction effect, however, has not been adequately assessed. First, such a proposition has seldom been examined using experimental methods. Prior studies, which relied mainly on observational data, were prone to the problems of confounding. Second, such a proposition is built on the assumption that job seekers consider a job's employment sector (i.e., working for government instead of in the private, for-profit sector) when making job decisions. Yet, little study has tested whether this assumption holds true.

There is a discussion in public administration scholarship on whether the employment sector matters in affecting individuals' job choices. Prior studies assume that working in government *per se* is meaningful to some individuals, and there are features grounded primarily or uniquely in public sector organizations that make their jobs attractive (e.g., Perry and Wise 1990; Rose 2012; Vandenabeele 2008). From this perspective, the employment sector itself is an important criterion for job choice decisions. However, recent studies argue that prospective applicants care more about other attributes of a job — for example, its service orientation — irrespective of whether or not its within government. Indeed, after taking into account the influence of other job-related

characteristics, the employment sector alone does not matter for individuals' job choice decisions (e.g., Choi 2017; Christensen and Wright 2011; Kjeldsen and Jacobsen 2013).

This study combines these seemingly conflicting insights by asking what affects the relative importance of employment sector vis-à-vis other job-related attributes in selecting public sector employment. Drawing up on signaling theory, this study outlines a theoretical mechanism which suggests a conditionality of the employment sector in affecting individuals' job choices. More specifically, this study argues that the relative importance of employment sector depends on the amount of direct job information available to prospective applicants. At the beginning of the job search process where people have little direct information about specific job positions, they will use a sector cue like "government" as a heuristic to judge whether certain jobs fit themselves. However, once more direct information about specific job-related attributes become available (such as information about salary, benefits, or the service orientation of a job), people will directly assess these job-related attributes to decide whether job positions fit themselves and rely less on employment sector cues to make their judgements and decisions. In sum, the more information job seekers have, the less important the employment sector would become for job choice decisions.

This study has two main purposes. First, it examines whether those with a higher level of risk aversion are more likely to choose public sector employment under different information conditions. Second, it examines the relative importance of employment sector vis-à-vis other job-related attributes in job choices under different information conditions. The contribution of this study is fourfold. First, this study experimentally examines the proposition of a job attraction effect, generating robust evidence to test if there is a

relationship between individuals' risk aversion and attraction to public sector employment. Second, this study extends the literature on public/private differences to the context of recruitment and job search by providing insights on how people are reacting to sector differences at different information conditions of the job search process. Third, this study advances research on public organizations' job attraction and selection (e.g., Kjeldsen and Jacobsen 2013; Leisink and Steijn 2008; Wright and Christensen 2010) by integrating insights from recruiting research which recognizes and delineates the decision-making process of job seekers (e.g., Swider, Zimmerman, and Barrick 2015). In line with these studies, this study argues that the job search is not a one-time event, but rather a process in which job seekers continuously respond to and are affected by situational factors before reaching a final decision. On this basis, this study posits that the amount of job-related information available to the job seeker (which this study conceptualizes as "information conditions") is one of the key situational factors affecting the role of employment sector in job choice decisions. Finally, this study contributes to the literature methodologically by implementing a multistage conjoint design. Unlike conventional conjoint experiments where individuals are provided with the same set of attributes, participants in this study were first randomly assigned to three different conditions representing different information conditions with varying degrees of job and organizational attributes. In a series of conjoint tasks, people were then asked to choose one out of two jobs that differed on a variety of job- and organization-related attributes, including employment sector. This unique design examines the relative importance of employment sector cues vis-à-vis other job-related attributes in affecting job choices across different information conditions.

3.2 Preferences for Public Sector Employment

Exploring the factors that affect individuals' preferences for public sector employment has been a prominent research area in public administration and management research (for a systematic overview, see Korac, Saliterer and Weigand 2019). Prior research can be broadly classified into two categories. First, a great deal of research has been conducted to explore the characteristics of individuals who prefer to work for the public sector over other employment opportunities (Korac, Saliterer and Weigand 2019). A number of individual-level driving factors have been suggested, such as having a high level of public service motivation (PSM) (e.g., Carpenter, Doverspike and Miguel 2012; Vandenabeele 2008), a high level of risk aversion (e.g., Dong 2017; Pfeifer 2010), being part of a racial/ethnic minority group, (e.g., Doverspike et al. 2011), or exhibiting significant intrinsic work values (e.g., Ritz and Waldner 2011). Second, a stream of recent studies examines job-related attributes that affect employers' attractiveness. Linos (2018) found that messages focusing on personal benefits were more effective than those focusing on PSM in attracting people to apply to a police force. Along similar lines, Asseburg and colleagues (2020) found that extrinsic and intrinsic employment attributes in job advertisements are more effective than prosocial attributes in predicting people's intention to apply for public sector jobs.

However, there are two limitations in the existing research that warrant further attention. First, it is unclear whether the public sector *per se* matters in affecting individuals' job choices. Much of the prior literature confounds the effect of a jobs' employment sector with that of other job-related attributes (Christensen and Wright 2011). In other words, it is unclear whether certain individuals (e.g., those who are high in PSM or risk aversion)

choose a public sector job because of the fact that it is offered by government (instead of the private, for-profit sector), or because it carries certain job-related attributes (e.g., service-oriented work). Addressing this question is theoretically important because it extends our understandings of the fundamental questions of the differences between the public and private sectors, and how do they affect individuals' evaluations and decision-making processes. It is also related to a key proposition of PSM theory: the greater an individual's PSM, the more likely the individual will seek membership in a public organization (Perry and Wise 1990, 370). If individuals indeed do not care about sector differences in the job search, the premise of the above proposition is challenged.

Second, much of the prior literature relies on observational survey data and treats the job search as a one-time event, despite it being a decision-making process that can last for weeks or months. During this process, job seekers gather and receive varying levels of information about job opportunities from different sources (Barber 1998; Swider, Zimmerman, and Barrick 2015). They evaluate and compare these alternatives to make a series of job choice decisions — such as deciding which job advertisements to pay attention to, which job openings to apply for, and which job offer to accept. Within this process, environmental or situational factors may moderate the effects of individual-level driving factors as well as employers' attributes in affecting individuals' preference for public sector employment. To date, few studies have started to explore how situational factors in the recruitment and job search process may affect individuals' selection for public sector employment. For example, Linos and Riesch (2020) examined the impact of administrative burden on the likelihood that a candidate will remain in the recruitment process.

3.3 Risk Aversion and Public Sector Employment

In general, the term “risk aversion” can be referred to as a tendency or propensity of individuals to prefer options associated with a lower level of uncertainty (and/or loss) over those associated with a higher level of uncertainty (and/or loss) (Kahneman and Tversky 1979; Weber, Blais and Betz 2002). This behavioral tendency occurs under the “risky choice” situations where individuals encounter two or more alternatives (i.e., courses of action) which are different in terms of their outcome variability— that is, the number of possible outcomes associated with an option, and the probability that these outcomes will occur. It has been long suggested that this behavioral tendency is determined by or a reflection of ones’ risk attitude (Dohmen et al. 2011; Schildberg-Hörisch 2018). Risk attitude, which is a person’s standing on the continuum from risk aversion over risk neutrality to risk seeking, concerns a person’s degree of favorability or unfavourability toward uncertainty *per se*. It is commonly considered to be an individual trait which plays an important role in shaping human decision making (Lilleholt 2019; Weber, Blais and Betz 2002).

Over the past decades, public management scholars and economists have proposed that people with a higher level of risk aversion are more attracted to work in government (Bellante and Link 1981; Bonin et al., 2007; Buurman et al. 2012; Dong 2017; Pfeifer 2011). The underlying assumption of this proposition is that government jobs are commonly perceived as a more secured type as it usually provides a stable income, better retirement and health benefits, and a lower probability of becoming unemployed. Relative security and stability exist primarily because of the merit-based system which prohibits public employees from being removed without proper legal procedures (Dong 2017), and

the behavior-oriented (rather than result-oriented) appraisal system. Such characteristics are ones of the major differences between public employment and other types of employment (Kim & Kellough, 2014), which are believed to be the source of attraction for risk averse individuals who value stability over high returns.

However, this proposition is subject to challenge and has not been adequately assessed. Empirically, such a proposition has seldom been examined using experimental methods. Prior studies, which relied mainly on observational data, were prone to the problems of confounding. Theoretically, recent research suggests that the risk preferences of individuals are not simply the function of ones' risk attitude. Rather, there is a variety of contextual factors that can affect individuals' decision-making under the risky choice situations (Weißmüller 2021). The relationship between individuals' risk aversion and the selection of public sector employment is therefore not guaranteed since it could be moderated or limited by contextual factors.

Drawing on the prior studies (e.g., Dong 2017; Pfeifer 2011), the first hypothesis of this study is set up for empirical testing:

Hypothesis 1: Comparing to those who have a lower level of risk aversion, those who have a higher level of risk aversion are more likely to choose public sector employment.

3.4 The Decision-making Process during Different Stages of the Job

Search

Prior research has identified several cognitive steps underlying the decision-making process of the job search. First, job seekers look into multidimensional attributes of a job.

Based on the descriptions of job advertisements, their prior knowledge, and information acquired from other sources, they develop a variety of perceptual *beliefs* towards the attributes of that job (Cable et al. 2000; Ehrhart 2006). Second, based on these job beliefs, job seekers implicitly estimate the congruences between themselves and the job. For example, they may conduct estimations on person-organization (PO) fits – that is, the match between their own personal characteristics (such as their personality, attitudes, and values) and the characteristics of the potential work organization (Carless 2005; Schneider, Goldstein, and Smith 1995, 749). They may also estimate person-job (PJ) fits – that is, the match between their knowledge, skills, and abilities (KSA) and demands of the potential job or the match between their needs, desires, or preferences and what is provided by that job (Carless 2005, 412; Edwards 1991; Kim et al. 2020, 288; Kristof-Brown et al. 2005, 284-285). The overall *fit perception* might consist of a combination of negative and positive congruence estimations on different attributes of a job. Finally, job seekers compare alternatives based on their fit perceptions (Swider, Zimmerman, and Barrick 2015), which would eventually determine the outcomes of the job search process, such as job seekers' attraction to organizations, application intentions, and job acceptance decisions (Barber 1998; Breaugh 1992; Cable and Judge 1996; Kristof-Brown et al. 2005).

Consistent with theories of bounded rationality (Simon 1955, 1956) and information overload (Cowan 2001; Edmunds and Morris 2000; Sutcliffe and Weick 2009), job seekers are not expected to consider all job-related attributes and conduct a full set of congruence estimations against all alternatives. Rather, to reduce cognitive processing costs, they will consider only a limited set of salient attributes and narrow their evaluation to a manageable and desirable set of alternatives (Boswell, Zimmerman, and Swider, 2012).

This implies that different job attributes have a different relative importance in driving job choice decisions. Indeed, considerable recruitment research has been conducted to identify the strongest or most important attributes that can affect job seekers' attraction and their subsequent choice decisions (e.g., Baum and Kabst 2012; Uggerslev, Fassina, and Kraichy 2012).

Remarkably, the relative importance of different job-related attributes is not static over the course of the job search process. Rather, prior research suggests that it will change over time and be affected by a variety of environmental or situational factors. First, when more information becomes available, job seekers may not only recognize new attributes of the jobs, but also restructure the relative importance of known attributes to foster decision-making (Swider, Zimmerman, and Barrick 2015; see also Soelberg 1967; Svenson 2003). Besides, the level of personal involvement in the job search process may moderate the relative importance of organizational and job characteristics (Baum and Kabst 2012): it has been found that personal involvement increases the importance of “soft factors” (such as organizational climate) and diminishes the effect of “hard factors” (such as salary).

3.5 The Function of Sector Cues in the Job Search

The employment sector of jobs — that is, the sector (e.g., public vs. private) to which the employers belong — is one of the earliest job-related attributes available to job seekers in the job search process. Such a sector cue may already become available to job seekers at the very beginning of the job search process when they need to look for and identify search generators (Power and Aldag 1985; Soelberg 1967). For example, the nature of job search websites (e.g., www.publicservicecareers.org as a website for public

sector jobs), and the keywords or categories (e.g., government, public service) used in mega search engines, inform job seekers about the employment sector of job alternatives. This attribute may also be revealed by the name of the employers (e.g., Department vs. LLC) or described in the abstract of job advertisements.

However, despite the mundane nature of sector cues, empirical research has just begun to disentangle and examine the impact of employment sector on individuals' job choices, as well as to assess its relative importance when compared to other job-related attributes (e.g., Choi 2017; Christensen and Wright 2011; Kjeldsen and Jacobsen 2013). Drawing on signaling theory (Spence 1973; Rynes et al. 1991), this study sets out a theoretical mechanism of how sector cues may inform and drive individuals' job choices in the job search process.

Employment sector may serve as an *imperfect* signal which allows job seekers to infer other job-related attributes of prospective jobs. According to signaling theory, job seekers' attraction to a job or an organization is based on the available information about them (Spence 1973; Rynes et al. 1991). Yet, at the initial job search state, job seekers may only have incomplete or superficial information about a job and its organization (Spence 1974; Rynes et al. 1991; Breugh 1992; Highhouse and Hause 1995; Chapman et al. 2005). Therefore, they need to interpret the limited information available to them as signals, thereby inferring working conditions based on more or less vague impressions (Spence 1973; Highhouse and Hause 1995; Rynes et al. 1991). These imperfect signals can help job seekers to form perceptual beliefs towards other job-related attributes (Baum and Kabst 2012; Ehrhart 2006), enabling them to perform congruence estimations and thereby judge the attractiveness of job alternatives.

This study argues that the employment sector of a job serves as such an imperfect signal since it is available to job seekers in the preliminary stage of the job search process. When direct information about job and organizational characteristics are not available, sector cues tap a set of images and impressions that people have towards the public sector (Garret et al. 2006; Goodsell 2004; Van de Walle 2004). Consequently, this study suggests that individuals use a job's employment sector (e.g., public vs. private) as a heuristic cue to infer the performance and other attributes of organizations (Hvidman and Andersen 2016; Hvidman 2018; Marvel 2015; Meier et al. 2019). This assumption is in line with insights of the PSM literature which has long assumed that the employment sector can serve as a proxy for organizational characteristics (Christensen and Wright 2011). Taken together, this study assumes that employment sector may affect job choice decisions by allowing job seekers to infer the organizational or job characteristics (e.g., organizational values, job security, benefits, etc.) of job alternatives and judge whether these alternatives fit themselves.

3.6 The Moderating Role of Job Search Information Conditions

The employment sector may matter in affecting individuals' job choices via two mechanisms. Yet, similar to other job-related attributes, its relative importance is likely to change over the course of the job search process (Baum and Kabst 2013; Swider, Zimmerman, and Barrick 2015). In the present study, I hypothesize that the effect of employment sector on job choice decisions is moderated by job search information conditions – that is, the conditions with regard to the amount of information available to job seekers in the job search process.

The recruiting literature suggests that job search activities can be thought of as a set of Bayesian opinion revision tasks, in which people form initial impressions of the desirability of jobs and organizations, then update these opinions as a result of information obtained as the job search and selection process unfolds (Murphy and Tam 2004). During this process, job seekers gather and receive information about job alternatives from different sources, including media, publications, reports, and organization websites (Barber 1998; Swider, Zimmerman, and Barrick 2015). They tend to accumulate more information over time when they move along the recruitment progress and have more interactions with the employers. From this perspective, the job search process can be distinguished into different conditions with regard to the amount of direct job information available to prospective applicants. For the purpose of this study, this study identifies and focus on three information conditions in the job search process.

The first information condition, which this study labels as the condition of “keyword research”, is a common condition experienced by job seekers at the initial stage of the job search process. In this stage, job seekers enter keywords into search engines or job search platforms. In return, they generate and acquire some preliminary information about the job openings, such as the title of jobs, the name of employers, and where the job advertisements are posted (see Online Appendix Figure 1 for a real-life example, which shows the search results in Google using the keyword “project manager”). Based on this information, job seekers decide which job openings to follow-up on (e.g., which job advertisements to click on) to proceed with the job search. Indeed, this beginning stage has important implications for job seekers’ final job choice decisions since it could determine

the set of job alternatives presented to job seekers in the later stages of the job search process.

This study hypothesizes that the employment sector of jobs matter in driving individuals' job choice decisions when job seekers are in this first information condition. As discussed, the employment sector represents a mundane attribute that can serve as an imperfect signal, allowing job seekers to infer the characteristics of prospective jobs from it. In the "keyword research" condition, job seekers are only able to acquire a very limited amount of direct information about specific job positions. Hence, they may need to rely on the employment sector to infer the characteristics of jobs to judge their attractiveness and decide what to follow up on. In practice, job seekers may use the employment sector as a criterion to identify jobs they will prioritize focusing on or applying to in the job search process.

Hypothesis 2: In the first information condition, employment sector cues (e.g., a government organization vs. a private for-profit company) will affect individuals' prioritizing intentions to apply for jobs.

The second information condition, which is labeled as the "skim over" condition, occurs in the early stage of the job search process right after the keyword research. In this condition, job seekers have selectively clicked on a number of job advertisements found by keyword research. They are not expected to scrutinize the advertisements in detail, but rather skim over the information they receive in this stage. For example, job seekers may just skim over the title and abstract of job advertisements. When doing so, job seekers start

to obtain direct information, though limited, about jobs, such as general information about an organization's values and norms (Swider, Zimmerman, and Barrick 2015, 884; Uggerslev, Fassina, and Kraichy 2012) (see Online Appendix Figure 2 for a real-life example).

This study hypothesizes that in this second information condition, the employment sector cues will become less effective in informing and driving job choice decisions than what they have been in the first information condition. It is because in this condition, job seekers do not need to solely rely on employment sector as an imperfect signal to infer organizational or job characteristics. Instead, they can start to use direct information, though limited, to decide whether job alternatives fit themselves. Besides, the concern about social identity associated with the jobs' employment sector is expected to become less salient, since more job-related attributes are now visible. Hence, job seekers may pay less attention to the employment sector of jobs, making it become less important.

Hypothesis 3: In the second information condition, employment sector cues will become substantively less significant in affecting individuals' prioritizing intentions to apply for jobs as compared to the first condition.

The third information condition, which this study labels as the "scrutiny" condition, occurs before job applications and lasts until the end of the recruitment and job search process. In this stage, job seekers have shortlisted a limited number of targeted job alternatives and prepare to apply for them. They are expected to scrutinize the shortlisted job advertisements and recruitment messages in detail and may do extra research to gather

additional information. After entering the selection process, job seekers may gather further information through their interactions with employers and their representatives during selection activities like interviews and site visits. Consequently, it is expected that in this stage, job seekers have more detailed direct information about the organizational and job characteristics of job alternatives (see Online Appendix Figure 3 for a real-life example).

This study hypothesizes that in the third information condition, the importance of employment sector in driving job choices will be further weakened, if not eradicated. It is because job seekers no longer need to use the employment sector as an imperfect signal to infer organizational characteristics. Instead, they can directly assess the fit between themselves and job alternatives using direct information available in this stage. Also, the social identity associated with the jobs' employment sector is only one of many job-related attributes individuals could consider in the decision-making process. Its salience may be overridden by other direct attributes.

Hypothesis 4: In the third information condition, employment sector cues will become substantively insignificant in affecting individuals' prioritizing intentions to apply for jobs as compared to the first condition.

3.7 Method

Research Participants

To test the theoretical expectations, I fielded a conjoint experiment among a diverse sample of US adults. In particular, 905 American adults were recruited online through Amazon Mechanical Turk (MTurk). To improve the response quality, this study required

participants to have a MTurk approving rate higher than 97%. This study also added a protocol developed by Burleigh, Kennedy, and Clifford (2018) and a captcha at the beginning of the survey to screen out potential bots, virtual private network (VPN) users and non-American respondents. Table 3.1 provides descriptive statistics for the entire sample, as well as within each experimental group.

Although a total of 905 respondents completed the conjoint experiment, the design permits us to treat a single respondent as ten observations because each respondent had to evaluate a total of ten job profiles (see below the description of the experimental design). Taking into account the nested structure of the data (see Hainmueller et al. 2014), this design yields an analytical sample of 9,050 observations, providing sufficient statistical power to detect medium to small-sized effects.

Table 3.1: Descriptive Statistics of Participants by Group (Information Stage)

	Group 1 (Information Condition 1)	Group 2 (Information Condition 2)	Group 3 (Information Condition 3)	Total
N	300	302	303	905
Age [Mean (SD)]	37.0 (12.6)	39.5 (13.2)	38.7 (13.1)	38.6 (13)
Female [%]	51.3	51.2	51.8	51.7
Race [%]				
White	78.0	74.2	75.9	76.0
Non-white	22.0	25.8	24.1	24.0
Marital status [%]				
Single, never married	44.3	43.4	46.5	44.4
Married or domestic partnership	44.0	44.4	42.9	43.8
Widowed	1.7	1.3	1.7	1.6
Divorced	10.0	9.6	7.6	9.1
Separated	1.0	1.3	1.3	1.2
No. of Children [%]				
0	60.7	51.0	55.8	55.8
1	15.0	14.2	12.9	14.0
2	16.0	21.9	18.5	18.8

3	5.7	8.0	9.2	7.6
More than 4	2.7	5.0	3.6	3.8
Education [%]				
High school or less	10.3	11.6	9.6	10.5
Some college or Associate degree	35.3	37.8	30.7	34.6
College graduate	40.7	38.1	40.9	39.9
Higher than college graduate	13.7	12.6	18.8	15.0
Income [%]				
Less than \$24,999	25.0	25.5	24.75	25.1
\$25,000 to under \$49,999	31.3	38.41	30.36	33.4
\$50,000 to under \$74,999	22.0	20.86	23.76	22.2
\$75000 or more	21.7	15.23	21.12	19.3
Current Employment [%]				
Local, state, or federal government	10.6	7.6	10.6	9.6
Nonprofit organization	8.3	8.2	7.9	8.1
Private company or business	53.3	52.6	47.9	51.3
Independent consulting or self-employed	8.0	11.8	14.5	11.4
Not working, Retired, Students, Others	19.9	19.7	19.1	19.6
PSM [Mean (SD); Min=1, Max=7]	4.53 (1.24)	4.66 (1.21)	4.46 (1.13)	4.55 (1.20)
*Risk Preference [Mean (SD); Min = 1, Max = 32]	9.38 (5.94)	9.34 (5.56)	9.10 (5.71)	9.30 (5.75)

Note: No significant group difference is found (using chi square test) at $p < .05$.

*People are more risk averse (less likely to take risk) if they have a lower score

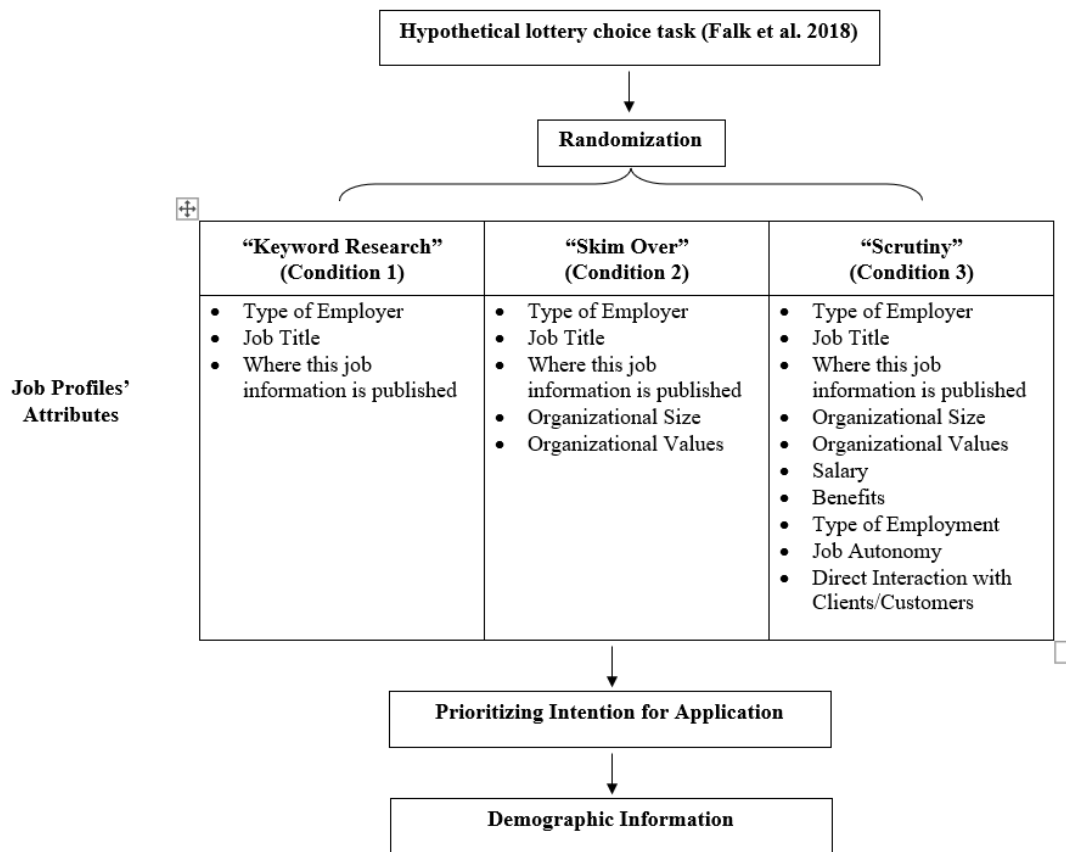
Experimental Design

This study implemented a choice-based conjoint design. Conjoint experiments have been widely used in marketing research to examine how different attributes of products affect consumers' buying decisions (Raghavarao, Wiley, and Chitturi 2010). They are also frequently used in the attraction-selection and recruitment literature (e.g., Christensen and Wright 2011; Zacher et al., 2017) and have recently seen an upsurge in various research areas of public administration (e.g., Jankowski, Prokop, and Tepe 2020; Jilke and Tummers 2018).

Participants in the experiment were first asked to complete a hypothetical lottery choice task developed by Falk et al. 2018 to elicit their risk preferences. Then, they were asked to imagine that they were a resident of a hypothetical U.S. city called Riverside, have just graduated from college, and were searching for a job in a certain service area in this city.² They were also told that they will see the information of some jobs and need to make choices between them. After that, participants were presented with a series of five conjoint tasks. Each task involved the presentation of a pair of job profiles; the job profiles had various attributes, and the values of these attributes were randomized independently. Participants were asked to choose one of the jobs they would intend to prioritize applying to. In other words, each participant was presented with five different pairs of jobs in total, and they had to choose one job for each of these pairs. Importantly, unlike conventional conjoint studies in which the same set of attributes is presented to all subjects, this conjoint experiment randomly assigned participants to one of three different conjoint conditions (see figure 3.1). In these conditions, the job profiles were associated with different sets of attributes, which were designed to mimic the amount of information about organizational and job characteristics available to job seekers in the three different job search information conditions.

² The service area mentioned in the introduction of each condition was randomized. In particular, one of the following sentences was randomly inserted: “you are now searching for a job in the field of health services in Riverside”; “you are now searching for a job in the field of education in Riverside”; “you are now searching for a job in the field of transportation and utilities in Riverside”; or “you are now searching for a job in Riverside” (i.e., service area not mentioned). Results of additional interaction analyses show that the difference in service area does not affect the effect of employment sector cues reported below.

Figure 3.1: The Design of the Conjoint Experiment



Specifically, in the first experimental condition, the evaluated job profiles contained three attributes, namely “Type of Employer”, “Job Title” and “Where this job information is published”. The first attribute included the employment sector cue. The latter two attributes are less important information that job seekers may rely upon when determining their attraction to job opportunities in the early stage of the job search (Uggerslev, Fassina, and Kraichy 2012). This experimental condition mimics the first information condition (i.e., the “keyword research” condition) in that it provides participants with little job-related information job seekers may gather through keyword

research. It allows us to test whether job seekers would rely on employment sector cues to identify jobs they will prioritize applying to under an imperfect information environment.

In the second experimental condition, the job profiles contained the three attributes that appeared in the first condition, as well as two additional attributes, namely “Organizational Values” and “Size of the Organization”. These two new attributes are general information job seekers may find in job advertisements and recruiting brochures (Swider, Zimmerman, and Barrick 2015). This condition was designed to mimic the second information condition (i.e., the “skim over” condition) where job seekers skim over job advertisements and start to gather limited direct information about jobs. It allows us to examine the relative importance of employment sector cues under a less imperfect information environment.

In the third experimental condition, the job profiles contained the five attributes that appeared in the first two conditions, plus five additional attributes, namely “Type of Employment”, “Benefits”, “Salary”, “Job Autonomy” and “Direct Interaction with Clients”. The first three new attributes are “hard factors” that have been frequently studied in prior studies (e.g., Baum and Kabst 2013; Christensen and Wright 2011; Uggerslev et al. 2012; Zacher et al., 2017). The fourth new attribute is one of the key job characteristics in Hackman and Oldham’s (1976) Job Characteristics Model, while the fifth new attribute is a characteristic receiving attention in PSM research (e.g., Ballart and Rico 2018; Christensen and Wright 2011). All these new attributes have been found to be influential for individuals’ job choice decisions. They are also potentially correlated with different images and perceptions about government work. Job seekers may not be able to gather direct information about these attributes until the latter stage of the job search (e.g., the

salary and benefits may have appeared as “negotiable” in job advertisements). This condition was designed to mimic the third information condition (i.e., the “scrutiny” condition) where job seekers gather more direct information about jobs after scrutinizing the job advertisements and potentially having had interactions with prospective employers. It allows us to examine the impact of employment sector cues under a more complete information environment. Table 3.2 provides a summary of attributes that appear in each condition and the randomized values of each attribute.

It is important to note that participants are allocated to one of the three information conditions (between-subject randomization), where they are shown different amounts of job-related attributes. These attributes are randomized across 5 rounds (within-subject randomization), meaning that participants stay within the same information condition for the duration of the study. In each round, participants have to choose between two jobs – see figure 3.2 for an example of a single round in the second information condition.

Figure 3.2: An Example of a Single Round in the Second Information Condition

(1/5)

Please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Management Trainee	Administrative Manager Trainee
Type of Employer	A public organization within local government	A for-profit company
Where this job information is published	Local newspaper	Local newspaper
Size of the Organization	Small ^[?]	Large ^[?]
Organizational Values^[?]	Effectiveness ^[?] and Efficiency ^[?]	Unknown / Not stated

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A
☐ Job B

Table 3.2: A Summary of Attributes and Values of Job Profiles in the Conjoint

Tasks

Appearance	Attribute	Randomized Values
Condition 1, 2, & 3	Type of Employer	<ul style="list-style-type: none"> • A for-profit company • A public organization within local government
Condition 1, 2, & 3	Job Title	<ul style="list-style-type: none"> • Administrative Manager Trainee • Management Trainee • Program Manager Trainee • Project Manager Trainee
Condition 1, 2, & 3	Where this job information is published	<ul style="list-style-type: none"> • Job search website • Local newspaper • Social media
Condition 2, & 3	Organizational Values	<ul style="list-style-type: none"> • Unknown/Not stated • Accountability and Reliability • Effectiveness and Efficiency
Condition 2, & 3	Size of the Organization	<ul style="list-style-type: none"> • Unknown/Not stated • Small • Medium • Large
Condition 3	Salary	<ul style="list-style-type: none"> • Unknown/Not stated • Slightly below national average • Around national average • Slightly above national average
Condition 3	Benefits	<ul style="list-style-type: none"> • Unknown/Not stated • Medical • Medical, Retirement • Medical, Retirement, Dental, Vision
Condition 3	Type of Employment	<ul style="list-style-type: none"> • Unknown/Not stated • Contract-basis employment • Permanent employment
Condition 3	Job Autonomy	<ul style="list-style-type: none"> • Unknown/Not stated • Low • Medium • High
Condition 3	Direct Interaction with Clients/Customers	<ul style="list-style-type: none"> • Unknown/Not stated • Low • Medium • High

Measures

The dependent variable of this study is individuals' prioritizing intentions for applying for a job in the conjoint tasks containing a pair of job profiles. This study measured this variable using the following question: *"If you had to choose between them, which of these two jobs would you prioritize applying to? [Job A or Job B]"*. The answer to this question was recoded into a dichotomous variable, where "1" represents an individual's preference for that particular job, and "0" represents that the individual did not choose it.³

To elicit individuals' risk preferences and thus their level of risk aversion, the hypothetical lottery choice task developed by Falk et al. (2018) was adopted. This lottery choice task was a part of the Global Preference Survey (GPS), which was an experimentally validated survey data set of time preference, risk preference, positive and negative reciprocity, altruism, and trust from 80,000 people in 76 countries. The validation procedure involved conducting multiple incentivized choice experiments for each preference and testing the relative abilities of a wide range of different question wordings and formats to predict behavior in these choice experiments. The particular items used to construct the GPS preference measures were selected based on optimal performance out of menus of alternative items (for details, see Falk et al. 2016).

In this task, participants were presented with a series of five binary choices. Choices were between a fixed lottery, in which the participant could win \$450 USD or \$0 USD,

³ This study also measured a secondary dependent variable, namely individuals' perceived attractiveness of a job, using a question: "On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate Job A (Job B)?" Yet, this variable is omitted in the reporting of findings since the regression analyses of two dependent variables show similar results.

and varying sure payments, of which the amount were between \$15 to \$465 USD. Choice of the lottery resulted in an increase of the sure amount being offered in the next question, and vice. Participants' responses to this lottery task have 32 possible outcomes. These outcomes were converted to a risk aversion scale ranging from 1 to 32. A lower score in this scale indicates a lower likelihood to take risks and a higher level of risk aversion (see Appendix: full questionnaire for the details).

In addition, participants were asked basic demographic questions (which are used in the covariate adjusted regressions in the subgroup analysis, see the discussion below), including age, gender, race, marital status, number of children, education, income, and current employment status. They were also asked to answer a single item question to self-report their level of risk aversion. Finally, participants' level of PSM were measured using the 5-item PSM global measure (Wright, Christensen and Pandey 2013). The Cronbach's alpha of this measure was 0.85. The full questionnaire can be found in the Online Appendix.

3.8 Analyses and Results

In contrast to the Average Treatment Effect in conventional experiments, the commonly used quantity of interest in the analyses of conjoint experiments is the Average Marginal Component Effect (AMCE). AMCE refers to the marginal effect of each randomized attribute averaged over the joint distribution of all attributes. In other words, it shows how a change in one attribute of a profile (e.g., a change in "type of employer" from private to public sector organizations) could causally affect the outcome variable, while averaging over the distribution of the remaining profile attributes. Following Hainmueller et al. (2014), which suggested that the AMCE can be non-parametrically

identified by a conventional linear probability model, this study examined the AMCE of each attribute by estimating linear regression models in which individuals' prioritizing intentions for applying for jobs as the outcome variable. Since each respondent evaluated ten job profiles (i.e., 2 profiles across 5 rounds), this study clustered standard errors by respondents to account for the clustered nature of the data (individuals nested in job observations).

Before running the regression analyses, this study conducted several diagnostic checks for the assumptions of estimating AMCE using non-parametric linear regression models (Hainmueller et al. 2014). The results show that all assumptions are met. There is no carryover effect and profile order effect; The results of balance checks (i.e., regressing participants' characteristics on profile attributes) show that the sample was balanced in terms of profile attributes and respondent characteristics.

To examine hypothesis 1, this study performed three-step interaction analyses. First, this study conducted a F-test to compare between a fully interacted model (with risk aversion fully interacting with all attributes of job profiles) and a restricted model to check if adding interactions will improve the model fit. Second, this study looked at the interaction term (e.g., risk aversion*employment sector) in the interaction models to check if it is statistically significant.⁴ Third, this study split the sample using >1SD and <1SD of the mean of risk aversion as the thresholds and check whether there are differences between the AMCEs in different sub-groups.

⁴ In each of the three interacted models (Appendix Table 2), we controlled for the following individual level characteristics: level of PSM, age, gender, race/ethnicity, marital status, number of children, education, income and current employment.

The results of the regression analyses related to Hypotheses 1, 2,3 and 4 are shown in Figures 3.3 and 3.4. The dots in these figures represent the coefficients (i.e., the AMCEs) of the regressions in Online Appendix Tables 1 and 4 (including their 95% confidence intervals). The AMCEs can be interpreted as the probability of intending to prioritize applying for a job that exhibits a particular characteristic.

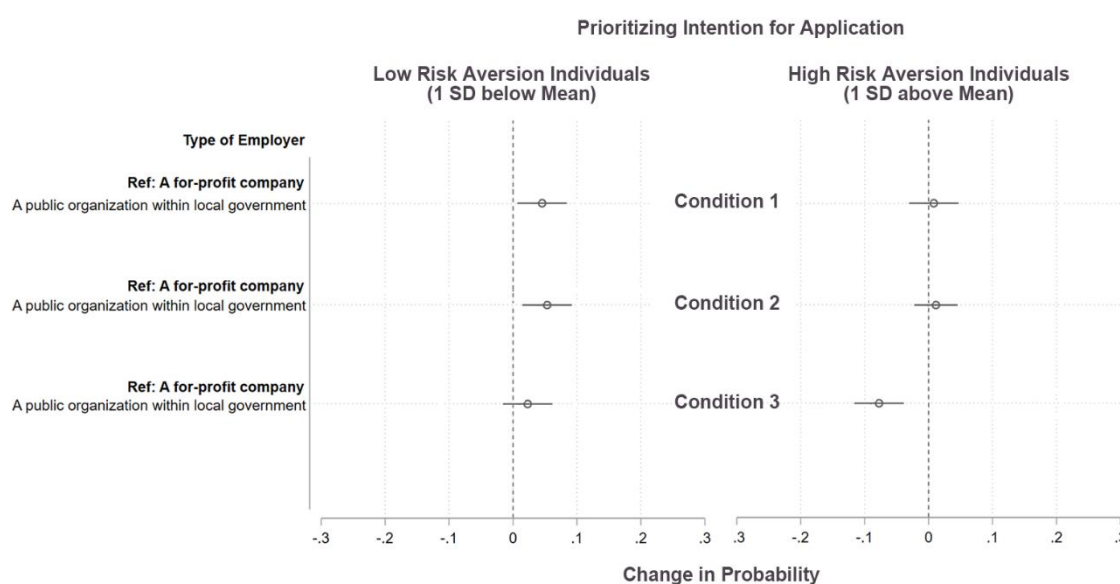
Hypothesis 1 suggests that those with a higher level of risk aversion are more likely to choose public sector employment than those with a lower level of risk aversion. The results of the three-step interaction analyses reject this hypothesis. In particular, the results of F-tests show that in all information conditions, when interactions between risk aversion and attributes of job profiles were added to the fully interacted models, the model fit did not improve significantly ($p > 0.05$) as compared to the restricted models. Besides, the regressions results (which can be found in Online Appendix Table 2) show that the interaction between the effect of individuals' risk aversion and the AMCE of employment sector on the outcome variable was not statistically significant ($p > 0.05$) in all information conditions.

To substantively present the results, this study splits the sample using $>1SD$ and $<1SD$ of the mean of risk aversion score and examine the AMCE of employment sector on the outcome variable in different sub-groups. The sub-group analysis results are presented in Figure 3.3 (the regression results are in Online Appendix Table 4). Specifically, the figure shows that in all information conditions, individuals with a higher level of risk aversion did not have a significantly higher probability of prioritizing public sector employment than those with a lower level of risk aversion. These results suggest that

participants with a higher level of risk aversion were not more affected by the employment sector cues and more likely to be attracted to jobs associated with a public sector cue.

Notably, in the above analyses, the hypothetical lottery task of Falk et al. (2018) was used as the measure of risk aversion. As a robustness check, a set of additional analyses were run using the single item self-reported measure of risk aversion. The result of this robustness check shows that the main results stay the same — the results of the three-step interaction analyses again reject hypothesis 1. This result is consistent with the claims of Dohmen et al. (2011), who suggested that the single item self-reported measure of risk aversion is a reliable measure that are highly correlated with ones' elicited risk preferences.

Figure 3.3: The Influence of Employment Sector on Job Attraction across Three Information Conditions Conditioned on Participants' Risk Aversion

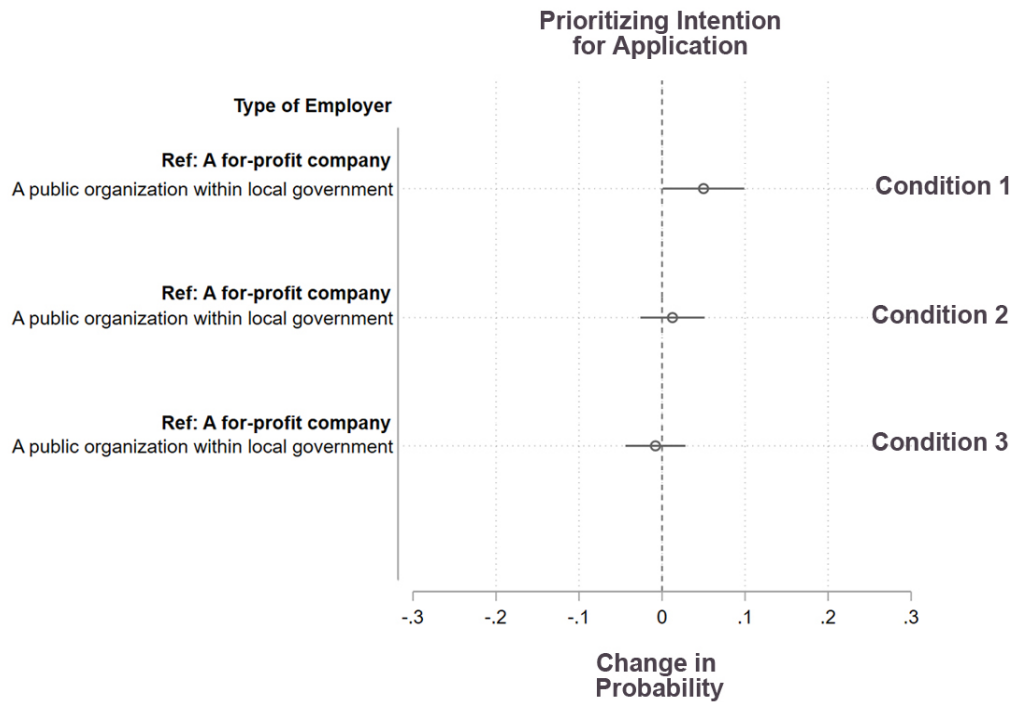


Hypothesis 2 suggests that in the first information condition, employment sector cues will affect individuals' intentions to apply for a job. The results support this expectation. Participants' propensity to prioritize a public sector job compared to a for-profit sector job increased by about 5% ($p < 0.05$).

Hypotheses 3 and 4 suggest that in the second and third information conditions, the effect of employment sector cues on individuals' application intentions appeared in the first information condition will decline and eventually disappear. The results support this expectation. In these two conditions, the AMCEs of the employment sector on the outcome variable were not statistically significant ($p > 0.05$); Participants in both conditions were not more/or less likely to intend to apply for jobs attached with a public sector cue than those attached with a private sector cue. This implies that employment sector cues were not effective in altering participants' job preferences when direct job-related information is provided (i.e., in the second and third information conditions).

Results of the AMCEs for remaining attributes in information conditions 1 through 3 can be found in Table 1 in the online appendix. It is found that job characteristics, including salary, benefits, type of employment, the level of job autonomy, and the level of direct interaction with clients/customers, have significant impacts on individual job choice decisions in information condition 3.

Figure 3.4: The Influence of Employment Sector on Job Attraction across Three Information Conditions



Supplementary Sub-Group Analyses

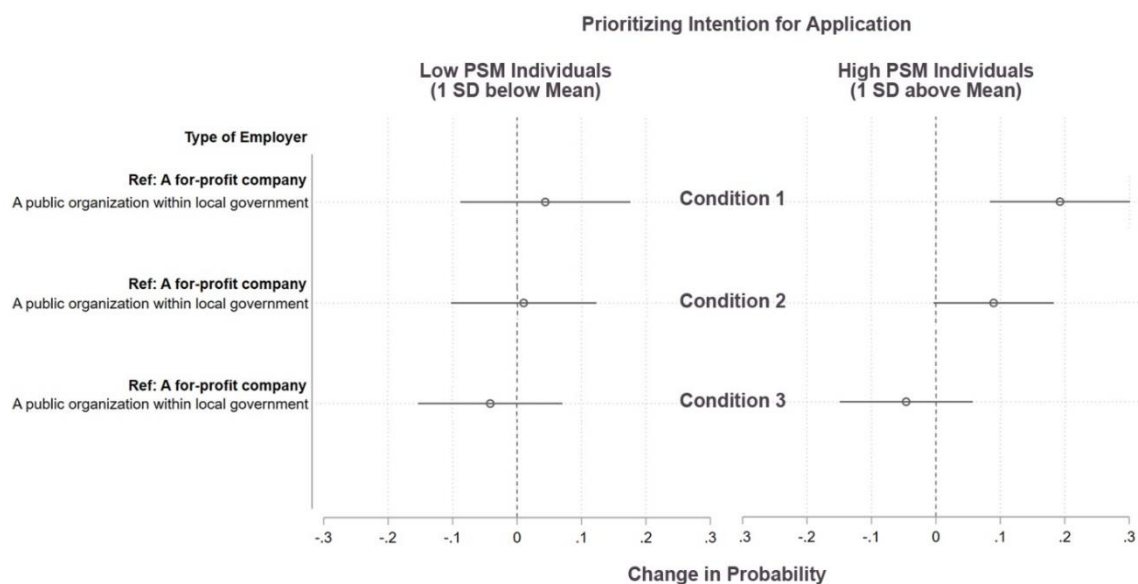
In addition to examining the main hypotheses, this study performed an additional sub-group analysis to further assess the heterogeneity of the results. The sub-group analysis exemplifies the findings discussed above, giving us a clearer picture of how job search information conditions affect the impact of employment sector cues on job choice decisions. Specifically, this study looked at whether participants' level of PSM would moderate the impact of employment sector cues on individuals' prioritizing intentions for job applications, and whether it differed across information conditions.

In the public administration literature, PSM has been defined both narrowly as “*an individual’s predisposition to respond to motives grounded primarily or uniquely in public institutions or organizations*” (Perry and Wise 1990, 368) and more broadly as “*motives associated with serving the public good*” (Perry and Hondehem 2008, 3). A fundamental proposition of PSM theory is that “*the greater an individual’s public service motivation, the more likely the individual will seek membership in a public organization*” (Perry and Wise 1990, 370). Based on this proposition, this study can expect that those who have a higher level of PSM are more likely than low PSM individuals to intend to apply for a job attached with a public sector cue (instead of a private sector cue). In other words, the “publicness” effect of employment sector cues (i.e., changing from private to public sector) in driving job choices is expected to be stronger for those who have a higher level of PSM. Yet, this publicness effect, as well as the differences in job choices between high and low PSM individuals, may be contingent on information conditions.

To examine these expectations, the three-step interaction analyses illustrated above were performed. The results of F-tests show that in the first information condition, when interactions between PSM and attributes of job profiles were added to the fully interacted models, the model fit was improved significantly ($p < 0.05$) as compared to the restricted models. However, in the second and third conditions, adding interactions did not improve the model fit significantly ($p > 0.05$). Likewise, regressions results (which can be found in Online Appendix Table 2) show that the interaction between the effect of individuals’ PSM and the AMCE of employment sector on the outcome variables was statistically significant ($p < 0.05$) in the first information condition. However, this interaction was not significant ($p > 0.05$) in the interaction models of the second and third information conditions.

To substantively interpret the significant interaction in the first stage, this study splits the sample using $>1SD$ and $<1SD$ of the mean of PSM and examine the AMCE of employment sector on the outcome variable in different sub-groups. The sub-group analysis results are presented in Figure 3.5 (the regression results are in Online Appendix Table 3). Specifically, in the first condition, high-PSM individuals increased the probability of prioritizing public sector employment by about 20% ($p < 0.05$). In contrast, low-PSM individuals were not more likely ($p > 0.05$) to do so. These results suggest that participants with a higher level of PSM were more affected by the employment sector cues and more likely to be attracted to jobs associated with a public sector cue than those associated with a private sector cue in the first condition. However, this difference diminishes in the second and third conditions.

Figure 3.5: The Influence of Employment Sector on Job Attraction across Three Information Conditions Conditioned on Participants' PSM



3.9 Discussion

Summary

The findings of this study do not support the proposition that risk averse individuals are more attracted to public sector employment: across all information conditions in the experiment, those with a higher level of risk aversion were not more likely to choose jobs offered by the public sector than those with a lower level of risk aversion. The findings also demonstrate the moderating role of information conditions in affecting how individuals respond to employment sector cues in making their job choice decisions: the more information job seekers have, the less important the employment sector becomes. In the first information condition, participants in this study were more likely to prioritize applying for a job which was offered by “a public organization within local government” than those offered by “a for-profit company”. This implies that job seekers use the employment sector as a decision-making criterion when making early job search decisions. However, the effect of employment sector diminished in the second and third information conditions. This implies that employment sector cues no longer matter for the job search once more job-related information becomes available.

The results of the supplementary sub-group analysis further confirm the second part of the findings. In the first condition, high-PSM individuals (but not low-PSM individuals) were more likely to prioritize applying for a public sector compared to a private sector job. This is consistent with the proposition of PSM theory (Perry and Wise 1990). However, in the second and third information conditions, the differences between high- and low-PSM individuals disappeared. This implies that even individuals with a high level of PSM

become insensitive to the jobs' sector difference once more direct information becomes available.

Limitations

Participants in this study were recruited from MTurk. Although the sample is sufficiently diverse, covering a full range of socio-economic characteristics, they are not statistically representative. Indeed, the average age of participants in this experiment was 38.6; around 80% of them reported that they are currently working – either working in the public, private, or non-profit sector, or as self-employed. While this study can make strong claims about the internal validity of this study due to the use of an experimental design, The findings cannot be necessarily generalized across the entire population of all US job seekers. Besides, about 80% of the participants were employed (see table 3.1). The results of this study might be different if it only included participants with no work experience. Future research may explore how the effects of information conditions could be moderated by different demographic characteristics.

Implications and Conclusion

The job search is not a one-time event, but rather a decision-making process that can last for days, weeks or even months. During this process, job seekers need to differentiate among alternatives, continuously respond to, and be affected by situational factors before making a series of job choice decisions. This study demonstrates that the job-related information available to job seekers at different stages constitutes a situational

factor affecting the relative importance of employment sector cues in job choice decisions. These findings advance the public administration literature on job attraction, which typically relied on cross-sectional survey data to study individuals' job choices at one particular point (Wright and Christensen 2010). The empirical results also add to the current recruitment literature, which argues that the predictors of job choice decisions are not "static" factors, but rather are dynamic variables that change over time depending on situations (e.g., Kim et al. 2020; Shipp and Jansen 2011). This study also echoes recent recruiting research, which calls for delineating the decision-making process of job seekers (e.g., Swider, Zimmerman, and Barrick, 2015). Together, this study demonstrates the need for future research in public administration to recognize job search as a decision-making process and take into account the influences of situational factors. In this way, a more comprehensive picture could be drawn of how individuals choose public sector employment.

The findings of this study also challenge a long-standing proposition in public administration that individuals with a high level of risk aversion are more likely to choose a job offered by the public sector. An underlying assumption of this proposition is that people's care about a job's employment sector during the job search. However, the findings suggest that the employment sector only matters in the early stages of the job search where individuals rely on imperfect signals to make some preliminary decisions, such as deciding what to click on and pay attention to. When more information become available, the employment sector of a job may no longer matter for job search decisions. In this sense, the theoretical proposition warrants revisions to take into account situational factors within the job search process.

Notably, the information conditions (i.e., “keyword research”, “skim over” and “scrutiny”) described in this study are just three examples of information conditions in a job search process. Indeed, a job search process may contain other information conditions. For example, prior studies suggested that job seekers form impressions and images of organizations even before they start to search for job advertisements and receive any information about job positions (Murphy and Tam 2004). They may use these impressions as screening criteria to decide which types of jobs to look for. Thus, the impressions job seekers have in the “pre-job search” phase are important determinants of their ultimate attraction to the organization (Anderson, Born, and Cunningham-Snell 2001; Barber 1998; Murphy and Tam 2004).

It might be that risk aversion or PSM still play an important role in shaping individuals’ job choice decisions despite their influences fade out in the later phases of a job search process. It is because individuals with a higher level of risk aversion or PSM might have a different behavioral pattern than those with a lower level of risk aversion or PSM in the “pre-job search” phase or the initial screening stage. They may be more likely and willing to explore, shortlist or bookmark public sector jobs which better fit with their PSM or risk averse preferences. If so, the job attraction proposition suggested in the prior research should be revised to better describe the true influences of individuals’ predisposition in shaping job choice decisions.

Regarding practical implications, the findings imply that job seekers may access different information and consider different aspects of job alternatives in different stages of the recruitment process. It is therefore important to deliberately tailor the content of recruitment messages so that they can better suit targeted groups’ concerns and attentions.

For example, the findings suggest that PSM matters more than risk aversion in shaping people's attraction to public sector employment at least in the early stages of a job search process, but its importance could be crowded out by job-related concerns in the later phases. A human resource manager of a public agency may use these insights to deliberately adjust the focus of their job advertisement/description to maximize the attractiveness of their openings.

Recent research in public administration has focused on improving the design of job advertisements to attract more and different candidates without reducing the quality of applicants (e.g., Linos 2018). While this research provides important insights for alleviating the human capital crisis (ibid.) in the public sector, its findings speak mainly to the early stage of the recruitment process. The findings of this study imply that information presented in the other stages (e.g., the screening phase or the advanced stages) also warrants improvement. For example, future research may explore how to provide information to improve job seekers' impressions, and hence increase their initial attraction to public sector jobs, before the starts of the formal recruitment process. Research may also explore the types of job-related information that can better sustain the job seekers' interests during the job search process.

Chapter 4 - Socialization and Risk Aversion: A Longitudinal Study

4.1 Introduction

Risk attitude, a person's standing on the continuum from risk aversion over risk neutrality to risk seeking, is commonly considered to be an individual trait which plays an important role in shaping human decision making (Lilleholt 2019; Weber, Blais and Betz 2002). An individual is risk averse if he or she tends to prefer outcomes with low uncertainty (and chance of loss) to those outcomes with high uncertainty (and chance of loss) (Kahneman and Tversky 1979; Weber, Blais and Betz 2002). In the realm of public administration, the degree of risk aversion among public employees has long been a concern, since public employees are often in charge of activities such as managing public welfare and pension funds or making strategic choices in public-private partnerships in which risk is pervasive and unavoidable (Weißmüller 2021). For the past three decades, a number of public management scholars and economists have argued that public sector employees are more risk averse than their private, for-profit sector counterparts (e.g., Bellante and Link 1981; Bonin et al. 2007; Buurman et al. 2012; Dong 2017; Pfeifer 2011). A high level of risk aversion in the public sector workforce could bring negative consequences, such as hindering the diffusion and adoption of innovations in public sector organizations (Borins 2001; De Vries, Bekkers and Tummers 2016).

While it is generally assumed that individual risk attitude is moderately stable over time, recent research has shown that this individual trait can change systematically and be affected by life cycle and external factors (Schildberg-Hörisch 2018). The knowledge

about the malleability of risk attitudes and how policymakers can make use of it to promote behavior changes is deemed desirable. Yet, in the field of public administration, despite the scholarly efforts in comparing the difference in risk aversion between public and private sector employees, there is little research exploring the factors or mechanisms that may affect risk attitude and increase (or decrease) the level of risk-aversion among public sector employees. Such a knowledge gap limits the potential development of management tools and reform practices that help to manage the overall level of risk-aversion among public employees.

Drawing on the attraction-selection-attrition-socialization (ASAS) framework (e.g., Schneider 1987; De Cooman et al. 2009) and regulatory focus theory (e.g., Higgins 1997), this essay seeks to examine one of the potential mechanisms that may affect the level of risk aversion among public sector employees. Specifically, it explores the potential effect of socialization and examines the following research question: *Does working longer in the public sector make people become more risk averse?* In the following sections, this essay will start by discussing the concept of risk aversion as well as its malleability. Then, it will discuss the effect of public sector socialization, based on which it will formulate the hypothesis about the relationship between individual risk aversion and public sector working experience. After that, it will present a longitudinal analysis using the 2008-2018 datasets of the German Socio-Economic Panel Study (GSOEP). The analysis focuses on tracing the responses of those who did not have a full-time work experience in or before 2008, (4,706 observations nested 472 individuals), examining if public sector work experience during 2009 to 2018 is associated with individual levels of risk aversion. The implications of the findings will be discussed in the final section.

4.2 Individual Risk Attitude and its Malleability

Individual risk attitude concerns a person's degree of favorability or unfavourability toward uncertainty *per se*. It is believed to be intimately linked to many economic and social behaviors and decisions (Dohmen et al. 2011). In the expected utility framework (Von Neumann and Morgenstern 1944) and its variants including prospect theory (Kahneman and Tversky 1979), risk attitude is typically understood as being related to the shape of the utility function presumed to underlie a person's choices: a person's risk attitude describes the shape of his or her utility function (derived from a series of risky choices) for the outcomes in question, and the terms "risk averse" and "risk seeking" (or "risk loving") technically refers to the curvature of the utility function (Weber, Blais and Betz 2002). A risk averse person has a utility function that is concave to the X axis (e.g., the wealth axis). This indicates that he or she has a diminishing marginal utility of wealth — that is, his or her utility increases with wealth but at a diminishing rate (Perloff 2014). It is predicted that a person whose utility function is concave picks the less risky choice if both choices have the same expected value. For instance, a risk averse person will disprefer a gamble yielding either \$0 or \$100 with equal probability to getting \$50 for sure (Stefansson and Bradley 2019). A person is said to be more risk averse if he or she has a more concave utility function or demands a large amount of "risk premium" — that is the amount needed to make a person indifferent between the sure and unsure outcomes. On the other hand, a "risk-seeker" or a risk-lover" has a convex utility function, while someone who is risk neutral has a constant marginal utility of wealth (Perloff 2014).

Traditionally, neoclassical economists assume that there is a single "overall" risk attitude and it governs risk-taking in all risk-related domains. Such a single parameter is

sufficient to characterize an individuals' risk preferences and risk behaviors (Schildberg-Hörisch 2018) across different domains such as financial investments, health issues and job-related risks. An example of a self-reported measure of risk attitude is a question in the German Socio-Economic Panel: *"How do you see yourself: are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?"* (11-point Likert scale; Wagner, Frick, and Schupp 2007). Dohmen et al. (2011) documented that this self-reported risk attitude is a reliable predictor of investment in stocks, self-employment, smoking, sports, and actual risk-taking in incentivized lottery experiments. They found correlations of about 0.5 across different risk domains, as well as for general risk attitude and domain-specific ones.

Neoclassical economists also assume that risk attitude is constant overtime. In the absence of measurement error, it is assumed that one should observe the same willingness to take risks and obtain the same estimate of the parameter of interest (such as the curvature parameter or risk premium) when measuring an individual's risk attitude repeatedly overtime. A standard approach in economics is to attribute any changes in measured risk attitude to measurement error or to consider them as meaningless noise (Schildberg-Hörisch 2018). Given its presumable stability, risk attitude is often treated as an individual trait — that is, an enduring pattern of behavior, thought and emotion that are relatively stable over time (Roberts 2009). It is assumed to be an important characteristic predicting individual decision-making.

While it is under debate whether a single overall risk attitude could govern risk-taking across different risk-related domains (Weber, Blais, and Betz 2002; Hanoch, Johnson, and Wilke 2006), recent research has started to challenge the perfect stability

assumption of risk attitude in neoclassical economic theory. It is argued that while individual risk attitude is moderately stable and sufficiently persistent to be considered an individual trait, it changes systematically overtime and is affected by a set of predictable factors (Schildberg-Hörisch 2018).

For example, empirical evidence shows that individual risk attitude is affected by life cycle: when people get older, they become less willing to take risks (Levin, Hart, Weller, and Harshman 2007; Moreira, Matsushita, and Da Silva 2010; Paulsen, Platt, Huettel, and Brannon 2011). Specifically, Dohmen et al. (2017) find that the willingness to take risks decreases linearly from early adulthood until approximately age 65. Besides, studies show that individual risk attitude is affected by continuously changing macroeconomic conditions. In general, individuals are substantially more willing to take risks during periods of economic growth and become more risk averse during recession periods (Buccioli and Miniaci 2018). Moreover, a related stream of studies found that exogenous shocks such as economic crises, violent conflicts, or natural catastrophes could significantly affect individual risk attitude (Dohmen, Lehmann, and Pignatti 2016; Gerrans, Faff, and Hartnett 2015). These events tend to make people become more risk averse. Finally, a growing body of research studies has shown that individual risk attitude is subject to the influence of temporary variations in psychological factors including individual's self-control resources, emotions, and stress (Fudenberg 2011; Fudenberg, Levine, and Maniadi 2014; Cohn, Englemann, Fehr, and Maréchal 2015). For instance, in an experiment of Guiso, Sapienza, and Zingales (2018), participants were asked to watch a horror movie before indicating their preferences in a hypothetical risky lottery question.

The results showed that, on average, the treated subjects had a 27 percent higher risk premium than the untreated ones.

The research on systematic and predictable changes in risk attitude has been growing rapidly in recent years. However, in the field of public administration, this topic is largely remained untouched. Some public administration studies in this area have adopted a “public vs. private” perspective, focusing on examining whether public employees are more risk-averse than their private, for-profit sector counterparts (e.g., Bellante and Link 1981; Bozeman and Kingsley 1998; Dong 2017; Nicholson-Crotty, Nicholson-Crotty and Webeck, 2019). These studies contribute to the debate of New Public Management (NPM) reform, which generally assumes that individuals are risk neutral (Tepe and Prokop 2018; see also Miller and Whitford 2002; Miller 2005; Miller and Whitford 2007) and that incentive schemes used in the private sector can induce public managers to be more entrepreneurial in their decision making (Nicholson-Crotty, Nicholson-Crotty and Webeck 2019). The findings of these studies shed insights on whether business practices could be effectively transferred to the public sector. Nevertheless, such a theoretical lens of public/private comparison implicitly assume risk attitude as a static concept. It provides limited insights into the malleability of risk attitude in the public sector.

Notably, a small handful of recent public administration studies have sought to understand the relationship between performance and the willingness to engage in risk-taking behaviors (e.g., adopting aggressive strategies or promoting innovations). These studies adopted the prospect theory framework (Kahneman and Tversky 1979) and drew heavily on the behavioral theory of the firm (Cyert and March 1963), suggesting that public

managers are more willing to look for innovative or new solutions when organizational performance falls below a predefined reference point (Meier et al. 2015; Nicholson-Crotty et al. 2016). Indeed, these studies rested on the prospect theory framework that the utility function is concave for gains and convex for losses, and that the difference between gain/loss domains predicts the variations in behavioral choices. Yet, such a framework assumes a fixed utility function and does not concern whether there is a change in the shape of the utility function – that is, whether that is a change in the risk attitude.

4.3 Risk Aversion and Public Sector Socialization

This study seeks to provide an exploratory analysis on the malleability of individual risk attitude in the public sector. It asks a basic question: *Does working longer in the public sector make people become more risk averse?* To establish the potential relationship between individual risk aversion and public sector work experience, this study draws on the concept of the ‘socialization effect’ under the attraction-selection-attrition-socialization (ASAS) framework (Schneider 1987; De Cooman et al. 2009). It also draws on regulatory focus theory (e.g., Higgins 1997) to provide a supplementary reasoning.

In the fields of organizational behavior and personnel psychology, socialization is defined as “the process by which an individual acquires the values, knowledge, and expected behavior needed to participate as an organizational member” (Cable and Parsons 2001, 2; Chatman 1991, 462). Socialization theory suggests that newcomers adapt their values, identities, and preferences to their position in the new organization. At the same time, organizations make efforts to integrate newcomers into organizational roles and

norms (Moyson et al. 2017). Through the involvement in organizational activities and having interactions with other employees and significant peers, newcomers adjust their values (e.g., the desirability of quality, respect for individuals, being socially responsible, risk taking; O'Reilly, Chatman, and Caldwell 1991), making them become more similar to the organization's (or organizational managers') values. The results of this socialization process are an increased homogeneity among employees, as well as an increase in the degree of person-organization fit (De Cooman et al. 2009).

There is inconclusive evidence as to whether risk aversion is a pervasive organizational characteristic of public sector organizations. Bozeman and Kingsley (1998) examined the differences in "risk culture" of public and private organizations. They defined risk culture as "the organization's propensity to take risk as perceived by the managers in the organizations." Their study did not find a higher level of perceived risk culture in public sector organizations. In a similar study, Chen and Bozeman (2012) examined whether the levels of organizational risk aversion as perceived by managers differ between public and non-profit organizations. The results of their study showed that organizational risk aversion is more pervasive in the public sector than in the non-profit sector. Importantly, both studies found that the perceived level of organizational risk aversion, or the perceived intensity of the risk culture, are predicted by a set of contextual factors including managerial trust on the employees, the degree of red tape, the clarity of organization's missions, the existence of personnel constraints, the links between promotion and performance, and the degree of involvement with elected officials. These results imply that whether a public sector organization has a value or culture of risk aversion is context

dependent. Not every public sector employee has a chance to directly internalize organizational risk aversion as a part of their individual values.

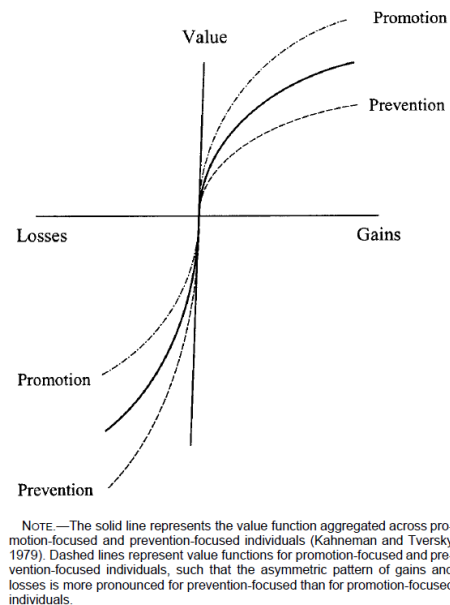
The theory of regulatory focus (e.g., Higgins 1997) provides a supplementary reasoning on why and how the socialization of risk aversion among public sector employees may still exist even if organizational risk aversion is not a pervasive characteristic of public sector organizations. Regulatory focus theory distinguishes between two independent self-regulatory systems or goal orientations that co-exist in every individual: promotion focus and prevention focus (Higgins 1997). Promotion focus is a system that originates from individuals' nurturance needs. It provides motivations to pursue hopes and aspirations, and to strive for positive outcomes. Prevention focus is a system that originates from individuals' security needs. It provides motivations to fulfil obligations and duties, and to avoid negative outcomes (Higgins 1997; Cesario, Higgins and Scholer 2008). Every individual has either promotion or prevention as their dominant motivational system. Accordingly, individuals can be commonly categorized into promotion-focused and prevention-focused people. In addition, situations can (temporarily) activate a promotion or prevention focus and cause individuals to behave in accordance with the activated motivational system (Bullard and Penner 2017).

Prevention focus generally triggers greater individual risk aversion (Pham and Higgins 2005). As discussed by Zhou and Pham (2004), two sets of mechanisms contribute to this phenomenon. First, prevention focus is characterized by vigilance, which usually translates into lesser openness to risk (Higgins 1997, 1998). Second, prevention focus is more attentive to losses. In many domains, options with greater uncertainty also present greater potential upsides and downsides, whereas options with a lower degree of

uncertainty are those associated with smaller potential upsides and downsides. In a choice between (a) a risky alternative with greater upsides and downsides and (b) a conservative alternative with smaller upsides and downsides, prevention focusing on negative outcomes would favor the conservative option (Zhou and Pham 2004; Pham and Higgins 2005, 31). Based on these arguments, it is predicted that prevention-focused individuals, as compared to promotion-focused individuals, are less favorable toward risk and uncertainty. The figure 4.1 below, which is adopted from Chernev (2004, 558), clearly presents the proposition that individuals' goal orientation will affect the shape of their utility function and lead to a difference in risk attitude.

Importantly, research suggests that the prevention focus orientation of individuals will direct their attention to duties and obligations. At the same time, this goal orientation will be triggered or become more salient when people focus on or are being reminded of their duties, obligations, and responsibilities (Leonardelli, Lakin, and Arkin 2007; Higgins 1998). For example, in their experiment, Leonardelli, Lakin, and Arkin instructed participants to “describe below your current duties and obligations. Mention how meeting your obligations and duties can help you avoid and prevent negative outcomes from happening in life”. (Leonardelli, Lakin, and Arkin 2007, 1004). They successfully activated the participants' prevention focus orientation. In contrast, the promotion focus orientation is suggested to be activated by the emphasis on hopes, ideals, wishes, and targets of achieving positive outcomes (Higgins 1998).

Figure 4.1 Individuals' Goal Orientation and the Shape of Utility Function



(Source: Chernev 2004, 558)

While it is unclear whether risk aversion is a pervasive organizational characteristic of public sector organizations, it is more certain that public sector organizations generally pay a great deal of emphasis on public employees' responsibilities, duties, and obligations. For example, in the US, the Executive Order 12674 forms a framework for the ethical behavior required and expected of all federal employees (see: <https://www.doi.gov/ethics/basic-obligations-of-public-service>). As a condition of public service, all public employees are expected to adhere to these basic obligations of public service. They are being warned that violations of ethics laws are subject to criminal or civil action by the Department of Justice. Besides, public employees are expected to show loyalty and duty to the public interest, as this is a means to maintaining public sector organizations' legitimacy vis-à-vis politicians and the public, and hence ensure its survival

(Kjeldsen and Jacobsen 2013). Moreover, public sector employment generally places more responsibility on the individual to be ethical and contribute more to society even in the public square outside of the workplace (Houston 2008). In fact, accountability, which can be defined as “certain obligations that arise within a relationship of responsibility, where one person or body is responsible to another for the performance of particular services” (Mulgan 2000), or as the quality of “act willingly to justify and explain actions to the relevant stakeholders” (Van Der Wal, De Graff and Lasthuizen 2008), has been found to be most important and salient value to the public sector organizations (ibid).

Consistent with socialization theory, one can expect that those who work in the public sector would adapt their behaviors to meet the legal and ethical expectations and obligations of public sector employees. In the public sector work environments, employees would be frequently reminded of their responsibilities, duties, and obligations and be cautioned about the negative consequences associated with the violations of legal and ethical standards and principles. All these elements could activate or consolidate the prevention focus orientation of those working in the public sector, making it a persistently dominant motivational system among these people. It is possible that the longer the people work in the public sector, the more often they would be affected by the prevention focus regulatory system, and that they would develop a higher degree of prevention focus. Since the prevention focus orientation is linked to individual risk aversion, ones can expect that those who have a longer work experience in the public sector are more likely to be unfavorable toward risk and exhibit a higher degree of risk aversion. Accordingly, this study hypothesizes that individual risk aversion is positively related to public sector work experience. In particular:

H1: The longer a person has worked in the public sector, the more risk averse he or she would become

Hypothesis 1 assumes a general positive relationship between the public sector work experience and individual risk aversion. However, this relationship might not be linear. The new entrance in an organization generally involves adjustment to the culture and getting to know new colleagues and everyday routines, and it can be challenging to become familiar with the specific work one is expected to perform (Kjeldsen and Jacobsen 2013). The beginning period in an organization is therefore the time period when individuals are more likely to adjust their values and behavioral patterns. Yet, after working in an organization for a longer time, employees may not further change their values since they have already adopted to the work environments. Accordingly, this study further hypothesizes that:

H2: The effect of public sector work experience on risk aversion is most pronounced in the beginning years and diminishes over time.

4.4 Method

To test the hypotheses, this study analyzes longitudinal data from the German Socio-Economic Panel (GSOEP) (Wagner, Frick, and Schupp 2007). The GSOEP is a representative, multi-cohort survey that has been running since 1984. It is one of the largest and longest-running multidisciplinary household surveys worldwide which follows best

practices in sampling and survey administration. Every year, individuals in households throughout Germany are surveyed. These respondents provide information on topics such as their income, employment history, education, psychological characteristics, and health conditions. To keep pace with changes in society, random samples are added regularly, and the survey is adapted accordingly. As of 2019, approximately 19000 households and 32000 individuals have been surveyed. The question measuring individuals' risk attitude was started to be included in 2004 and 2006 and appeared continuously during the years 2008 to 2018 (See https://www.diw.de/sixcms/detail.php?id=diw_01.c.814095.en for more information about the GSOEP).

Germany is a particularly good institutional example for the analysis since it is the “homeland of bureaucracy” (Hoffmann 2019). Cultural observations suggest that German administrations from federal level over states to local authority districts rely heavily on hierarchic structures, disciplined work, and a long-term, non-agile style of work (ibid. 2019). Responsibilities are strictly fixed for public employees, and the authorities seldom bend the rules. In contrast, the US bureaucratic system is claimed to be relatively more flexible, consumer service-oriented, but inefficient in general. One might thus expect that Germany could be a more likely case, if not the “most likely case” (Blatter and Haverland 2012), to find a public sector socialization effect on individual risk aversion. It is because more rigorous work environments, which emphasize responsibilities and rules, are more likely to make individuals to become prevention-focused and risk-averse over time (see the discussion above). In this sense, Germany could serve as an empirical case which has a higher chance of detecting any potential socialization effect on risk aversion. The findings

can inform further explorations of the socialization effect in less rigorous contexts (like the US), guiding the formulation of research hypotheses in future studies.

Several SOEP files were merged to construct a dataset for analysis. This dataset offers detailed information on individuals' employment status, sector of employment, age, years of education, and other characteristics over time. The analysis includes the years 2009 to 2018 (the records in 2008 were used as screening criteria).

Sample

There are two restrictions on sample selection. First, the analysis is restricted to individuals who have continuously participated in the study during the years 2008 to 2018. Those who have dropped out from the study, or those who joined the study in the middle of this period, are excluded from the analysis. For example, if a person responded to the questionnaire in 2018 (i.e., his or her personal ID can be found in this year) but did not participate in the survey in 2008, his or her record will be excluded from the analysis. This restriction ensures that the panel being observed is balanced. Second, the analysis is restricted to those who reported to have no full-time working experience in or before 2008. It implies that 2009 would be the first year when respondents potentially started to have a full-time work. This restriction guarantees that the respondents included in the analysis are a "blank slate", and hence empirically an ideal testing ground for identifying and examining any socialization effect. This restriction also guarantees an accurate calculation of the length of a person's (public sector) work experience during the period of 2009 to

2018. After these restrictions, the final sample consists of 472 different individuals and 4,706 strongly balanced observations.⁵

Measures

The dependent variable of this study is *individual risk aversion*. It is measured by a 11-point Likert scale question “*How do you see yourself: are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?*” (0 = not at all willing to take risks, 10 = very willing to take risks). It is recoded so that higher values correspond to higher risk aversion. Dohmen et al. (2011) suggested that this self-reported question is a reliable measure of ones’ risk attitude which predicts individual risk-taking behaviors and preferences. They found correlations of about 0.5 between this risk attitude measure and other domain-specific risk-taking measures.

The main independent variable is *public sector work experience*. It is a generated variable counting the years of full-time employment in the public sector for each individual cumulatively between the time interval 2009 and 2018 (i.e., the part-time employment or internship experiences in the public sector are not included). It is generated from a binary question “*Do you work for a public sector employer?*” (1 = yes; 2 = no) and a question about the employment status of respondents. For example, if a person reported that he or she was full-time employed in 2009 and 2010 as well as answered “yes” to the binary question in both years, the *public sector work experience* he or she had in 2010 would be “2” years. But if he or she answered “yes” to the question in 2009 and “no” in 2010, or if

⁵ The regression analyses with 472 individuals only contain 4,706 rather than 4,720 observations. The missing observations are caused by the missing data in respondents’ demographic details, which are used as control variables in the analyses.

he or she reported to be not full-time employed in one of the years, the *public sector work experiences* he or she had in 2010 would be “1” year.

A range of time-variant variables are included in the fixed effect model (see the discussion below) as control variables. One of them is *work experience* (i.e., total work experience), which is a generated variable counting the years of full-time employment for each individual cumulatively between the time interval 2009 and 2018. The method of generating this variable is similar to that of *public sector work experience*: a person will earn 1 year work experience if he or she reported to be full-time employed in a certain year. Other control variables in the fixed effect model include *age*, *years of education*, *marital status*, and *income* (current gross labor income in Euro).

Empirical Strategy

To test Hypothesis 1, this study develops the following fixed effect models:

$$RA_{it} = \beta_0 + \beta_1 * X_{it} + \beta_2 * Y_{it} + C * AgeEduMarInc_{it} + \alpha_i + \varepsilon_{it} \quad (1)$$

$$RA_{it} = \beta_0 + \beta_1 * X_{it} + \beta_2 * Y_{it} + \beta_3 * X_{it} Y_{it} + C * AgeEduMarInc_{it} + \alpha_i + \varepsilon_{it} \quad (2)$$

where RA_{it} is the level of risk aversion of an individual in a particular year t . X_{it} is the *public sector work experience* an individual has in a particular year t . Y_{it} is the *work experience* an individual has in a particular year t . $AgeEduMarInc_{it}$ is a vector containing other time-variant control variables including age, years of education, marital status, and income. α_i is the individual fixed effect and ε_{it} is the error term.

In model 1, *work experience* is included as a control variable. It is because working *per se*, rather than working in the public sector, may have influences on individual's risk aversion. This model is thus seeking to control the influence of total work experience and to provide an estimation of how working in the public sector *per se*, as comparing to not working, may affect individual's risk aversion (i.e., a publicness effect). However, total work experience and public sector work experience could not be separated from each other in reality. They may work interactively and affect the level of individuals' risk aversion. Thus, in order to fully test Hypothesis 1, model 2, which contains an interaction term between total work experience and public sector work experience, is adopted.

Both models include the fixed effect of individuals. As such, it is able to control for any time-invariant influences from individual. Besides, heteroscedasticity-robust standard errors are used as the assumption of homoscedasticity is rejected with a Breusch-Pagan/Cook-Weisberg test ($p < 0.01$).

To test the Hypotheses 2, a quadratic model is employed:

$$RA_{it} = \beta_0 + \beta_1 * X_{it} + \beta_2 * (X_{it})^2 + \beta_3 * Y_{it} + C * AgeEduMarInc_{it} + \alpha_i + \epsilon_{it} \quad (3)$$

Model 3 is largely the same as model 1, except a quadratic term, “*public sector work experience* ²” $(X_{it})^2$, is added to the model. If the coefficients of the base term *public sector work experience* and its quadratic term are negative and significant, it indicates that public sector work experience has a diminishing effect on individuals' risk aversion over time, holding other factors being controlled.

4.5 Results

Table 4.1 reports the descriptive statistics of the respondents in 2009 and 2018; Table 4.2 reports the regression results of the fixed effect models; Figure 4.3 shows the mean and standard deviation of the level of risk aversion of these respondents between 2009 and 2018; Figure 4.4 shows the mean and standard deviation of the level of risk aversion by the respondents' years of work experience in the public sector, and Figure 4.5 shows the mean and standard deviation of the level of risk aversion by the respondents' years of work experience.

As shown in Table 4.1 and Figure 4.3, 66.3% of the respondents (n=472) included in the analysis are female. In 2009, their average age was 30.6 years, and the average years of education they received was 12.2 years. On average, they earned 1,065 Euro per month, and 25.6% of them were married. Their average score of self-reported risk aversion was 6.9 out of 10 (the higher the scores, the more risk averse a person was). In 2018, the average age of the respondents increased to 40.6 years, and the average years of education they received was 13.8 years. Their average monthly salary increased to 2785 Euro, and 43% of them were married. On average, their self-reported risk aversion score was 7.0 out of 10. Overall, the level of self-reported risk aversion of these respondents was remained stable over this 10-year interval. Notably, in 2018, 26.7% of these respondents have worked in the public sector at least for a year during the interval 2009 to 2018, while 61.4% of them had at least one year work experience. The mean duration of public sector work experience (among those who have worked at least one year in the public sector) is 3.9 years, and the mean duration of work experience (among those who had at least one year work experience) is 5 years.

Table 4.1: Descriptive Statistics of the Respondents in 2009 and 2018

	2009	2018
Female	66.3%	66.3%
Age	30.6 (16.0)	40.6 (16.0)
Years of Education	12.2 (2.7)	13.8 (3.4)
Gross Monthly Income (in Euro)	1,065 (1,166)	2,785 (1,758)
Marital status		
• Married	25.6%	43.0%
• Single	67.8%	45.8%
• Others	6.6% %	11.2%
Have worked in the public sector (at least for one year)	3.2%	26.7%
Mean duration of public sector work experience among those who have worked at least one year in the public sector	1	3.9 (2.4)
Have working experience (at least for one year)	6.8%	61.4%
Mean duration of work experience among those who had at least one year work experience	1	5.0 (2.7)
N	472	472

The numbers in parentheses are standard deviations.

Table 4.2: Regression Results of the Fixed Effect Models

VARIABLES	Risk Aversion		
	Model 1	Model 2	Model 3
Public Sector Work Experience	-0.00 (0.03)	-0.10* (0.05)	-0.11** (0.05)
Public Sector Work Experience ^ 2			0.02** (0.01)
Work Experience	-0.03* (0.02)	-0.04** (0.02)	-0.03* (0.02)
Public Sector Work Experience*Work Experience		0.01** (0.01)	
Age	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Marital Status	-0.03 (0.04)	-0.03 (0.04)	-0.03 (0.04)
Years of Education	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Income	0.00* (0.00)	0.00** (0.00)	0.00** (0.00)
Constant	6.62*** (0.26)	6.57*** (0.27)	6.57*** (0.27)
Observations	4,706	4,706	4,706
Number of Respondents	472	472	472
R-squared	0.00	0.00	0.00

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 4.2: The Respondents' Level of Risk Aversion (Mean and SD) by Year

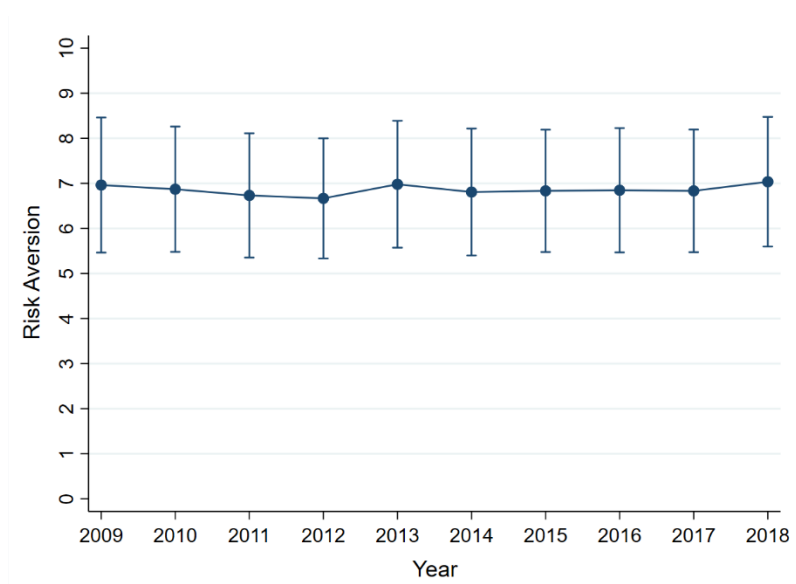


Figure 4.3: The Respondents' Level of Risk Aversion (Mean and SD) by Public Sector Work Experience (Year)

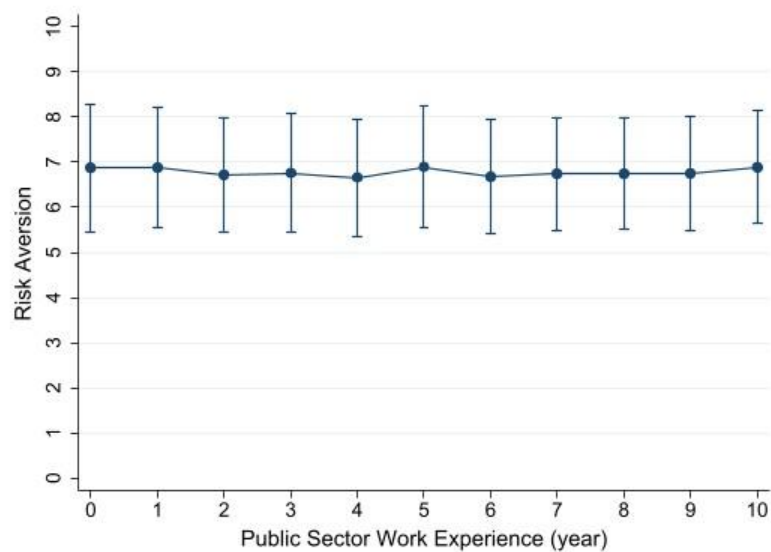
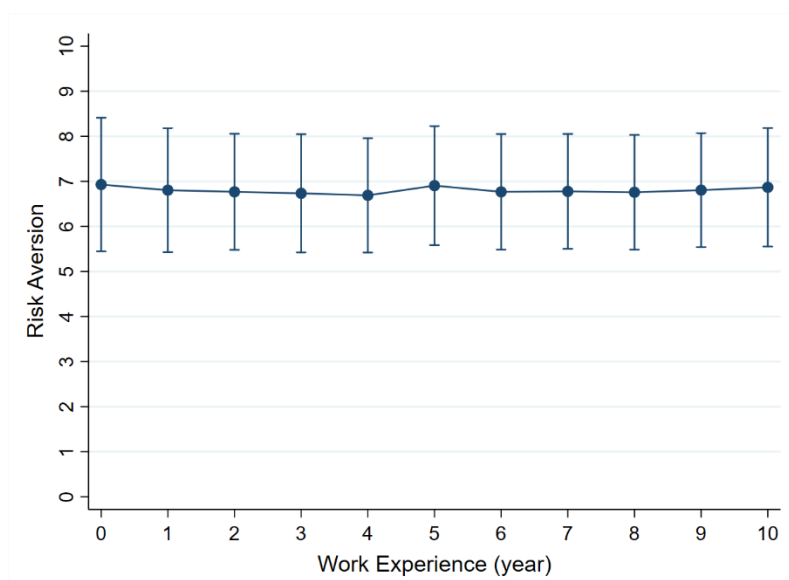


Figure 4.4: The Respondents' Level of Risk Aversion (Mean and SD) by Work Experience (Year)



Hypothesis 1 of this study suggests that the longer a person work in the public sector, the more risk averse he or she may become. This hypothesis is partially supported. As shown in Figure 4.4, respondents' level of risk aversion generally remained stable regardless of the change in the public sector work experience. Model 1 of Table 4.2 shows that the public sector work experience of respondents is not significantly correlated with their level of risk aversion ($p > .05$). This result is against the hypothesis, suggesting that when the influence of work experience is being controlled, working in the public sector *per se* (i.e., a publicness effect) does not affect the level of individuals' risk aversion. Notably, as shown in Figure 4.5, the respondents' level of risk aversion generally remained stable regardless of the change in their work experience. Model 1 of Table 4.2 shows that work experience is not significantly correlated with individual risk aversion ($p > .05$). This

result suggests that work experience *per se* does not significantly affect the level of individuals' risk aversion.

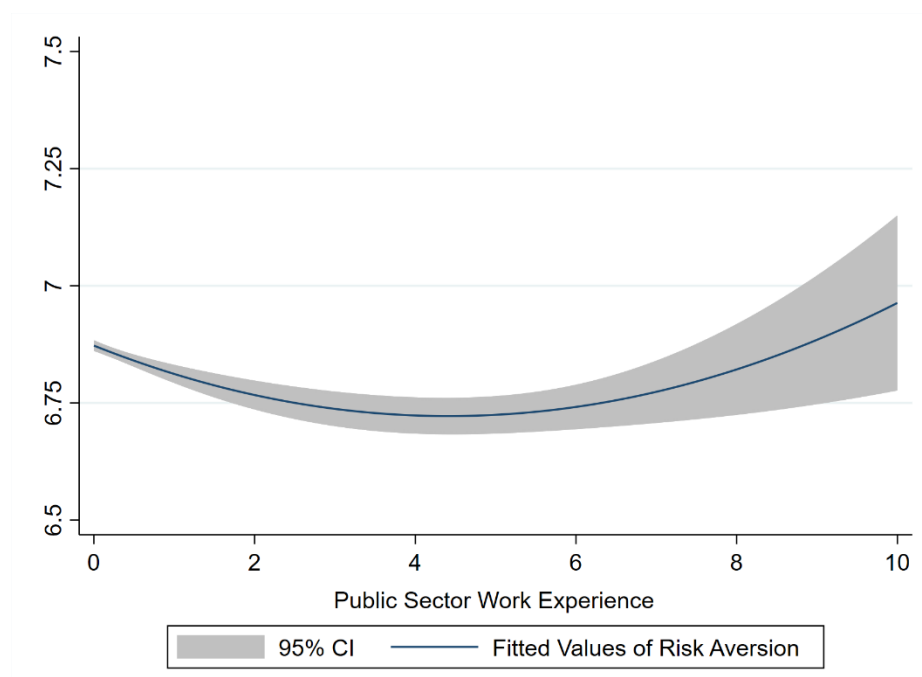
However, as shown in model 2 of Table 4.2, the interaction term between work experience and public sector work experience is positive and statistically significant ($p < .05$). This suggests that depending on the length of a person's total work experience, working longer in the public sector work could increase his or her level of risk aversion over time. The longer a person works AND the longer this person works in the public sector, the more risk averse he or she would become.

To substantially present this result, this study splits the sample using 4-year work experience as a cutoff point (i.e., the mean duration of work experience among those who had at least one year work experience) and examine the effect of public sector work experience on individuals' risk aversion (while controlling the influence of work experience *per se*). The result of this subgroup analysis is presented in appendix Table S1. It is shown that public sector work experience is not significantly correlated with the level of risk aversion ($p > .05$) among those who only had 1 to 4 years of work experience. In contrast, for those who had 4 or more years of work experience, having an extra year of work experience in the public sector would lead to a 0.15 (out of 10) point increase in the risk aversion score. This effect is statistically significant at the 0.1 level ($p = .062$).

Hypothesis 2 of this study suggests that the effect of public sector work experience on risk aversion is most pronounced in the beginning years and diminishes over time. The findings reject this hypothesis. As shown in model 3 of Table 4.2, the base term *public sector work experience*, as well as the quadratic term *public sector work experience*² are both statistically significant ($p < .05$). The coefficient of the base term is negative, while the

coefficient of the quadratic term is positive. This implies that, while other factors are being controlled, the relationship between individual risk aversion and public sector work experience *per se* is u-shaped: public sector work experience will first undermine individual risk aversion (however see the result of the robustness check), and have an exponential positive effect on it over time. Figure 4.5 below presents this relationship.

Figure 4.5: Quadratic Prediction of Individual Risk Aversion from Public Sector Work Experience



Robustness Checks

Two robustness checks were performed. The first one is to check whether the main results hold when the analysis only includes those who aged below 30 in 2008. Younger people usually have a lower level of risk aversion (Levin, Hart, Weller, and Harshman

2007), but they are also less likely to engage in newcomer socialization activities (Finkelstein, Kulas and Dages 2003). Hence, how younger people react to the effect of public sector work experience may be different from that of the entire sample. The inclusion of this restriction reduces the final sample to 330 people with 3,291 observations.

The results of this additional analysis are reported in Table S4.2. It is shown that the main results remain unchanged. In model 1, public sector work experience is not significantly correlated with individual risk aversion ($p > .05$); in model 2, the interaction term between work experience and public sector work experience remains statistically significant ($p < .05$); in model 3, the base term and quadratic term of *public sector work experience* are positive and statistically significant ($p < .05$). Notably, unlike the results reported in model 1 of Table 4.2 where work experience is not significantly correlated with risk aversion ($p > 0.05$), the result of this robustness check shows that this correction is significant ($p < .01$), with a small coefficient of -0.05.

In the second robustness check, a new variable called *private sector work experience* was added to models 1-3. It is a generated variable counting the years when individuals were working full-time for a non-public sector employer cumulatively between the time interval 2009 and 2018. It is generated from a binary question “*Do you work for a public sector employer?*” (1 = yes; 2 = no) and a question about the employment status of respondents. Adding this variable into the models further control the influence of ones’ work experience outside the public sector.

The findings of this robustness check are presented in Table S4.3. It is shown that the main results largely remain unchanged. In model 1, public sector work experience and work experience are not significantly correlated with individual risk aversion ($p > .05$); in

model 2, the interaction term between work experience and public sector work experience remains statistically significant ($p < .05$); in model 3, the quadratic term of *public sector work experience* are positive and statistically significant ($p < .05$). Notably, however, unlike the results reported in model 3 of Table 4.2 where the base term of public sector work experience is negatively and significantly correlated with risk aversion ($p < .05$), the result of this robustness check shows that this correction is insignificant ($p > .01$). This implies that while public sector work experience would have an exponential positive effect on individual risk aversion over time, it is unclear whether public sector work experience would first undermine individual risk aversion at the beginning. Thus, it is unclear whether their relationship is exactly u-shaped.

4.6 Discussion

This study provides an exploratory analysis on the malleability of individual risk aversion in relation to public sector work experience. Based on the attraction-selection-attrition-socialization (ASAS) framework (e.g., Schneider 1987; De Cooman et al. 2009) and regulatory focus theory (e.g., Higgins 1997), this study hypothesizes that the longer a person works in the public sector, the more risk averse he or she may become. Unlike previous studies which adopted the perspective of public/private comparison (e.g., Ayaita, Guelal and Yang 2018; Dong 2017), this study examines the influence of public sector work experience on individuals' risk aversion with and without controlling for the influence of work experience *per se*. The findings of the main analyses and robustness check partially support the hypothesis. It is found that when the influence of work experience is being controlled, public sector work experience *per se* does not have a

significant impact on individuals' risk aversion. Indeed, the effect of public sector work experience depends on the length of a person's total work experience. In general, the longer a person works AND the longer this person works in the public sector, the more risk averse he or she would become. In addition, the result of the quadratic model shows that public sector work experience could have an exponential effect on individual risk aversion, holding other factors being controlled.

Before discussing the implications of these findings, several limitations of this study warrant attention. First, the sample size of this study is relatively small ($n=472$) as compared to other studies using GSOEP (e.g., Ayaita, Guelal and Yang 2018). This is caused by the adoption of two restrictions on sample selection, namely, to exclude those whose records could not be found during the years 2008 to 2018, and to exclude those who had full-time work experience in or before 2008. These restrictions ensure that the respondents included in the analysis are "blank slates", which are ideal for testing the potential socialization effect. The restrictions also ensure that the observations are strongly balanced, and that the calculation of ones' (public sector) work experience is accurate. Hence, these restrictions improve the quality of the sample. The drawback, however, is losing statistical power due to the reduction in sample size. Nonetheless, given the longitudinal nature of the panel data, a sample of 472 respondents is able generate more than 4,700 observations, which is a considerable amount allowing us to detect medium to small effects. Hence, the findings of this study are arguably valid despite the relatively small sample size.

Second, this study focuses on people who did not have full-time work experience in or before 2008 and tracks their records until 2018. The maximum possible duration of

public sector work experience of these people is 10 years. Hence, this study is not able to examine whether highly experienced public sector employees (i.e., those who have more than 10 years' work experience in the public sector) would become more risk averse than those who are less experienced. Indeed, the findings of Buurmana et al. (2012) implied that the risk preferences of highly experienced public sector workers are different to those who have a moderate duration of work experience as well as to those who just start their job. The level of risk aversion of highly experienced workers is hence uncertain and worthy for future investigation.

Third, despite the GSOEP data is a representative sample of Germany's population, the restricted sample in this study is imbalanced in terms of its gender ratio – 66.3% of the respondents included in the analysis are female. Prior studies suggest that women are generally more risk averse than men (Croson and Gneezy 2009). The imbalance in the sample may thus affect the generalizability of the findings.

Finally, the main independent variable of this study, namely *public sector work experience*, is generated from a binary question “*Do you work for a public sector employer?*”. However, in the GSOEP questionnaire, the term “public sector employer” is not defined, and there is no follow-up question asking the public sector employees to indicate the agency they are working with. Thus, there could be a large variation in the public sector work experience among these respondents. It also limits the further exploration of whether working in different service areas (e.g., education vs. policing) in the public sector could have different impact on individuals' risk aversion.

Keeping these limitations in mind, the findings of this study have some important implications. First, this study adds to the growing body of research about the malleability

of individual risk aversion (Schildberg-Hörisch 2018). It suggests that work experience and public sector work experience could interactively make people become more risk averse over time. This finding resonates the recent challenges to the claim that risk aversion is an individual trait that will remain stable over time (ibid.).

Second, the findings suggest that the relationship between public sector work experience and individual risk aversion is not simple and linear. It is shown that public sector work experience only predicts risk aversion when people have more work experience. It is also shown that the relationship between public sector work experience and individual risk aversion may be curvilinear. However, the reasons behind these findings remain unclear. It could be that the newcomers to public sector organizations are more motivated by their interests and aspirations in serving the public (Kjeldsen and Jacobsen 2013), and hence be resistant to the environmental influences that drives them to be prevention focused and risk aversion. Yet, when they gain more experience in working (in the public sector), their motivations might be challenged by the “reality shock” (Blau 1960; Kjeldsen and Jacobsen 2013), and they might become more adherent to bureaucratic rules and norms. Future research should investigate the dynamics underlying the public sector socialization effect.

Third, the findings of this exploratory study provide some support for the proposition of a socialization effect of risk aversion. It is shown that the level of risk aversion of public sector employees is malleable in nature, and that work experience and public sector work experience could interactively affect the level of individual risk aversion. While the mechanisms underlying this effect warrant further investigation, such findings advance the discussion on a longstanding question in public administration: Are public

sector employees more risk averse than their private sector counterparts? Instead of simply collecting new data to compare the level of risk aversion between public and private sector employees, this study advances the discussion by asking a question from a different perspective: What could possibly make public sector employees more risk averse than their private sector counterparts? Such a question implies that the public/private difference in individual risk aversion is not static. Rather, it could be an outcome of a variety of contextual and environmental factors that are manipulatable in nature. Such an understanding lays the foundation for exploring potential management tools and reform practices that help to manage the overall level of risk aversion among public employees. This area of research warrants further investigation given the importance of individual risk aversion in predicting and determining individual preferences and behaviors (Dohmen et al. 2011).

Table S4.1: Regression Result of the Subgroup Analysis

VARIABLES	Risk Aversion	
	Those who had 1-4-year work experience	Those who had more than 4-year work experience
Public Sector Work Experience	-0.09 (0.10)	0.15* (0.08)
Work Experience	0.13* (0.07)	-0.00 (0.10)
Age	-0.02 (0.03)	-0.03 (0.09)
Marital Status	0.02 (0.11)	0.08 (0.17)
Years of Education	0.05 (0.07)	-0.00 (0.16)
Income	-0.00 (0.00)	0.00 (0.00)
Constant	6.56*** (0.96)	7.23** (3.07)
Observations	1,084	550
Number of Respondents	290	161
R-squared	0.00	0.01

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table S4.2: Robustness Check 1 – Respondents Aged below 30 in 2008

VARIABLES	Risk Aversion		
	Model 1	Model 2	Model 3
Public Sector Work Experience	-0.00 (0.02)	-0.12** (0.05)	-0.12** (0.05)
Public Sector Work Experience ^ 2			0.02*** (0.01)
Work Experience	-0.05*** (0.02)	-0.06*** (0.02)	-0.06*** (0.02)
Public Sector Work Experience*Work Experience		0.02** (0.01)	
Age	0.04*** (0.01)	0.04*** (0.01)	0.04*** (0.01)
Marital Status	-0.04 (0.05)	-0.04 (0.05)	-0.04 (0.05)
Years of Education	-0.02* (0.01)	-0.01 (0.01)	-0.01 (0.01)
Income	0.00 (0.00)	0.00* (0.00)	0.00* (0.00)
Constant	6.09*** (0.27)	6.01*** (0.27)	6.01*** (0.27)
Observations	3,291	3,291	3,291
Number of Respondents	330	330	330
R-squared	0.00	0.01	0.01

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table S4.3: Robustness Check 2 – Adding Private Sector Work Experience

VARIABLES	Risk Aversion		
	Model 1	Model 2	Model 3
Public Sector Work Experience	0.01 (0.04)	-0.09 (0.06)	-0.10 (0.06)
Public Sector Work Experience ^ 2			0.02*** (0.01)
Work Experience	-0.04 (0.03)	-0.05 (0.03)	-0.05 (0.03)
Public Sector Work Experience*Work Experience		0.01** (0.01)	
Private Sector Work Experience	0.01 (0.03)	0.01 (0.03)	0.02 (0.03)
Age	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Marital Status	-0.03 (0.04)	-0.03 (0.04)	-0.03 (0.04)
Years of Education	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Income	0.00 (0.00)	0.00** (0.00)	0.00** (0.00)
Constant	6.66*** (0.28)	6.61*** (0.28)	6.61*** (0.28)
Observations	4,706	4,706	4,706
Number of Respondents	472	472	472
R-squared	0.00	0.00	0.00

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Chapter 5 – Conclusion and Implications

5.1 Summary

Risk aversion refers to the tendency or propensity of individuals to prefer options associated with a lower level of uncertainty (and loss) over those associated with a higher level of uncertainty (and loss) (Kahneman and Tversky 1979; Weber, Blais and Betz 2002) under the risky choice situations. Traditionally, it is believed that this tendency is simply a reflection of the shape of ones' utility function (i.e., their risk attitude; Schildberg-Hörisch 2018); more recently, it is argued that this tendency is a characteristic that is strongly influenced by context (Weber, Blais and Betz 2002; Weißmüller 2021). Regardless of this debate, it is generally believed that this individual characteristic has a strong predictive power for a variety of behaviors in different contexts (Dohmen et al. 2011). The concept of risk aversion has therefore received an enormous amount of scholarly attention from different fields of the social sciences.

In the field of public administration, the research on public employees' risk aversion, as well as the factors that can affect its level, is underdeveloped as compared with other disciplines. This dissertation sought to address this gap by providing a systematic review based on 26 relevant articles published in public administration and other related fields. It also conducted a survey vignette experiment with a multistage conjoint design to test the job attraction effect — a mechanism that can affect the level of risk aversion among public sector workforce overtime. The dissertation also conducted a longitudinal analysis of the GESOP datasets to examine whether working longer in the public sector would lead to a rise in the level of individual risk aversion.

The findings of the systematic review suggest that more than half of the prior studies in public administration did not clearly define the concept of risk and risk aversion: these studies did not indicate whether they refer risk to as “uncertainty” or “the chance of loss” and whether they refer risk aversion to as a “trait” or a “state”. When operationalizing the measurement of risk aversion, prior studies relied heavily on the self-report approach as well as the direct observations of risk-taking behaviors. The incentivized experimental approach has seldom been adopted in public administration. Concerning the antecedents or the underlying factors of individual risk aversion, only a limited number of empirical studies have been conducted, and only a few environmental and personal factors have been identified and examined.

The findings of the conjoint experiment suggest that when choosing a job associated with a public sector cue, individuals with a higher level of risk aversion (as measured by a hypothetical lottery choice task) do not behave differently than those with a lower level of risk aversion. In addition, the study finds that the more information job seekers have, the less they care about the employment sector of a job. For example, in the later stage of the job search progress where job seekers receive and scrutinize more detailed information about the job openings, the effect of employment sector diminishes or even be completely crowded out. This implies that the employment sector of a job may be irrelevant to job choice decisions, since individuals usually make up their mind in the later stage of the job search progress when they have collected all the information they need. Together, these findings directly and indirectly challenge the proposition of a job attraction effect, which suggests that those high in risk aversion would choose public sector jobs in the job search process.

The findings of the longitudinal analysis and the robustness check partially support the hypothesis of a work socialization effect. While the level of individuals' risk aversion could not be solely affected by work experience *per se* and public sector work experience *per se*, it is found that individual risk aversion is significantly correlated with the interaction of these two forms of work experience. This means that depending on the length of a person's total work experience, working longer in the public sector work could increase his or her level of risk aversion over time. The longer a person works AND the longer this person works in the public sector, the more risk averse he or she could become

5.2 Implications for Research and Practice

The implications of the findings of this dissertation can be classified into three categories, including 1) implications for public administration research, 2) implications for risk aversion literature, and 3) implications for practice.

Implications for Public Administration Research

Over the past decades, public administration scholars and economists have suggested that public sector employees are in general more risk averse than their private sector counterparts (e.g., Bellante and Link 1981; Buurman et al. 2012; Tepe and Prokop 2018). However, the source of such a difference remains uncertain. The most used explanation for this phenomenon is the proposition of a job attraction effect — that is, individuals high in risk aversion will self-select into the public sector (e.g., Dong 2017; Pfeifer 2011), and this will eventually lead to a highly risk averse public workforce.

While prior studies relied on cross-sectional or longitudinal survey data to examine the proposition of a job attraction effect, Essay 2 of this dissertation uses an experimental approach to test whether such an effect can be found across different information conditions. The findings are inconsistent with that of the prior studies: there is no evidence showing that those with a higher level of risk aversion would behave differently than those with a lower level of risk aversion in choosing public sector employment. More fundamentally, it is questionable whether individuals would substantially consider the employment sector of a job when making the job choice decisions in the later stages of the job choice process.

On the other hands, the findings of Essay 3 provide an alternative explanation to the existence of a public/private difference in individual risk aversion. It is found that depending on the length of a person's total work experience, working longer in the public sector work could increase his or her level of risk aversion over time. Such a finding implies that individual risk aversion is malleable in nature, and that the work settings in the public sector contain some elements that could have a socialization effect on individuals, making them become more risk averse over time. This finding resonates the early view of Bozeman and Kingsley (1998), who suspected that an individual's risk preference may be affected by organizational and environmental factors.

While the findings of this dissertation deepen our understandings on the source of the public/private difference in individuals' risk aversion, they do contain some more profound meanings. As discussed in the introduction, most of the prior studies in public administration have adopted a theoretical lens of "public vs. private" comparison, focusing on examining *whether* public employees are more risk-averse than their private, for-profit

sector counterparts (e.g., Bellante 1981; Bozeman and Kingsley 1998; Nicholson-Crotty, Nicholson-Crotty and Webeck 2019; Tepe and Prokop 2018). Such a theoretical perspective, however, is deterministic in nature which conceals the possibility that the individual and aggregate level of risk aversion of public employees are subject to change, or even manipulation.

This dissertation is a significant departure from the comparative perspective in studying risk aversion in public administration. Under its conceptualization, risk aversion in the individual level is not just a function of the shape of individuals' utility function — which is commonly considered to be a relatively stable personality trait (Weber, Blais and Betz 2002). Rather, it can also be a function of a variety of contextual factors, such as individuals' perceptions of the expected outcomes and their risk perceptions, which are arguably influenced by situational factors such as information environment (Finger and Weber 2011). In the aggregate level, the level of risk aversion of public sector workforce may be constantly affected by the work socialization effect, but this effect may also be moderated by certain conditions which are to a certain extent controllable. In short, this dissertation provides and demonstrates a ground for studying the variation in the absolute level of risk aversion in the public sector workforce and its employees, which is an important topic in its own right.

Indeed, this topic becomes increasingly important since uncertainty about choice outcomes facing governments has gone up as the result of ever faster social, environmental, and technological change (Weber 2010). It is of practical significance since the emerging policy problems facing governments are increasingly “wicked” — that is, they do not correspond neatly to the conventional models of policy analysis used at the time; they

involve multiple possible causes and internal dynamics that could not assumed to be linear; and they have negative consequences for society if not addressed properly (Peters 2017; Rittel and Webber 1973). If risk aversion is situational and malleable in nature, then it could a potential intervention point to influence and modify behaviors. If it is really the case, then the “*whether*” question may no longer be the most important one. Rather, it is important to understand *when* and *why* public employees or the workforce may become more risk averse, and *how* the level of risk aversion can be adjusted to influence and modify behaviors.

Implications for Risk Aversion Literature

Across different disciplines of the social sciences, the von Neumann and Morgenstern’s (1944/2004) expected utility framework has still dominated the research of individuals’ preferences under risky choice situations (Stefansson and Bradley 2019). Individuals’ risk attitude, which reflects the shape of ones’ utility function, is still regarded as a major, if not the only, factor which underlies individuals’ risk preferences (Weber, Blais and Betz 2002). Such a factor is often treated as a personality trait, which is believed to remain stable over time (Schildberg-Hörisch 2018).

However, there is an increasing amount of evidence showing that this framework is inadequate in explaining and predicting individuals’ risk preferences and behaviors (Weber, Blais and Betz 2002; Finger and Weber 2011). This is particularly true when studying individuals’ *domain-specific* risk preferences. For example, an individual who take risks in finance does not necessarily choose the riskier options in recreational or social interaction decisions. As a response, a growing number of recent studies suggest that

individuals' risk preferences are not determined by a single, trait-like factor. Rather, they are influenced by a variety of contextual factors (Weißmüller 2021). Besides, the stability assumption of individuals' risk attitude (i.e., the shape of ones' utility function) is also challenged. It is suggested that individuals' risk attitude is subject to the systematic influences of long-term environmental factors (such as economic cycle) and short-term situational changes (such as emotional atmosphere) (Schildberg-Hörisch 2018).

This dissertation joins and supports this scholarly camp which is growing in its influence. It adds to the growing literature by providing an exploration on whether individual risk aversion is subject to the influence of public sector work experience. The findings provide support for the recent theoretical development, showing that individual risk aversion is malleable in nature. The findings also lay a foundation for future research to explore what exactly are the elements in the workplace settings that could systematically influence the level of individuals' risk aversion.

Implications for Practice

This dissertation gives important messages to practitioners in public administration. Unlike what is suggested in previous studies, the experimental evidence of this dissertation shows that individuals with a higher level of risk aversion do not have a higher likelihood to select public sector employment. This implies that the newcomers to public sector organizations are not prone to risk aversion in default. Whether these people would become more risk averse overtime depends on how they are socialized in the workplace. It is therefore important for public administration leaders and managers to understand the roles they may play in shaping the behavioral tendency of their fellows.

Once we accept the possibility of systematic change in individuals' risk aversion, an array of important questions arises: How can public administration leaders and managers evaluate alternative incentive schemes or management practices when individuals' preferences lack complete stability? Can and should public administration leaders and managers make use of the malleability of risk aversion to promote behavior changes in the workplace that are deemed desirable (such as proactive and innovative behaviors)? What are the potential management tools that can adjust the level of risk aversion in a certain agency? Can the clients of public service benefit from the malleability of risk aversion of public employees? Answers to these questions are deemed important since they would have vital real-world consequences.

Indeed, individual risk aversion could be viewed as a double-edged sword (Dong 2017). Research indicates that there is a link between individual risk aversion and other important personal traits such as innovativeness (Rogers 2003) and entrepreneurship (Dess and Lumpkin 2005). Having a group of employees with low risk aversion working together may create an energetic work environment and improve the proactive performance of an agency. However, risk aversion could sometimes be a good thing as it implies a better stewardship and lawfulness. Increasing the level of risk aversion among employees could be beneficial to public agencies of which the work tasks require cautious to safeguard public interests. It is thus important to explore for potential management tools and practices that help to manage the overall level of risk aversion among public employees to serve the different performance requirements of different agencies.

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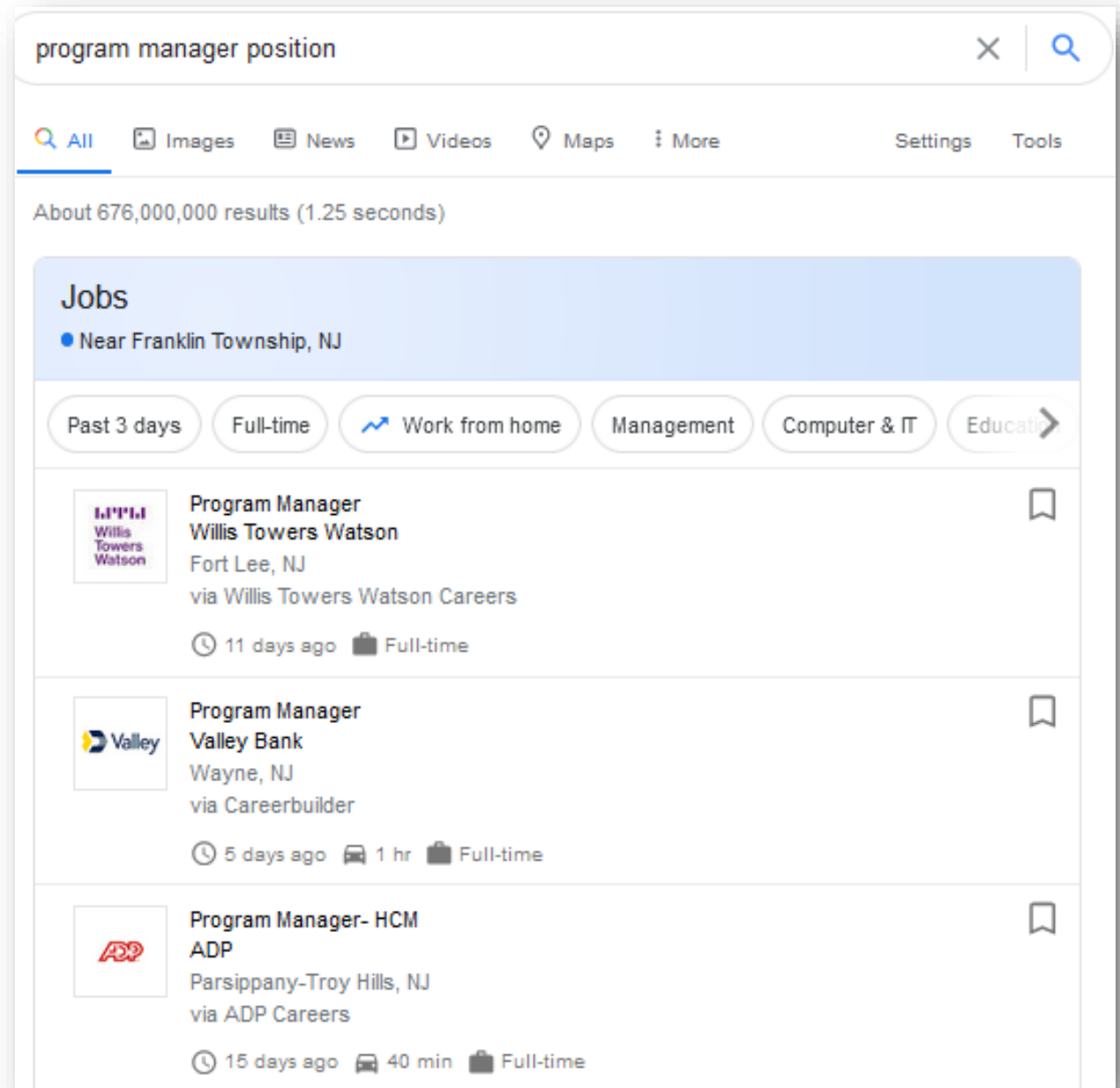
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Appendix (Essay 2)

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Appendix Figure 1: A Real-life Example of the “Keyword Research” Condition in a Job Search Process



Appendix Figure 2: A Real-life Example of the “Skim Over” Condition in a Job Search Process

[Leadership Development Executive Trainee](#)

Sacramento Promotional Management Firm

Elk Grove, CA

Type Full-Time

Our firm has been passionate about developing high capacity leadership and preparing individuals to become future business owners and leaders, since its inception in 2015. We are seeking outgoing and ...

[Quick Apply](#)

Report Job

[Management Trainee Entry Level](#)

Lehigh Executives Allentown, PA

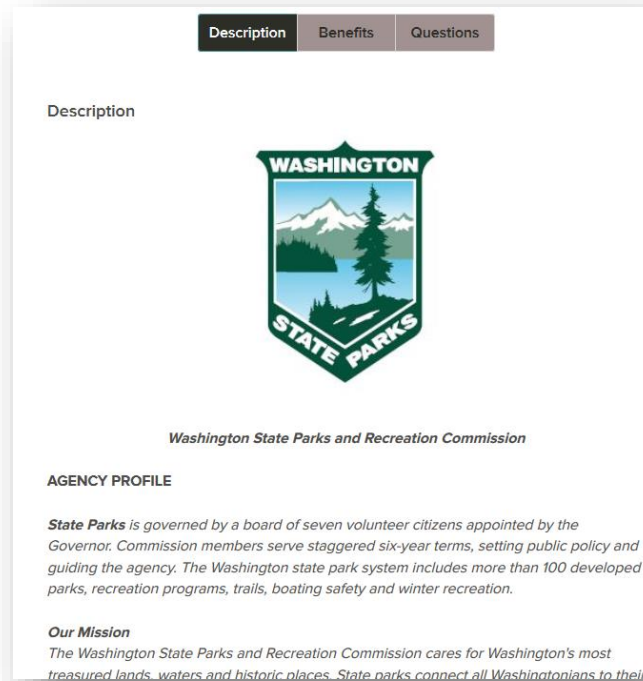
Type Full-Time

Company Description At Lehigh **Executives**, our mission is to deliver consistent results for our clients through both proven systems and dynamic innovations. We pride ourselves in mentoring our ...

[Quick Apply](#)

Report Job

Appendix Figure 3: A Real-life Example of the “Scrutiny” Condition in a Job Search Process



This announcement is for a full-time **Administrative Assistant 4** position at the Eastern Region Headquarters Office, located in East Wenatchee, WA.

For more information on Washington State parks please visit [here!](#)

This posting will remain open until filled. It is in the candidate's best interest to apply before July 24th, 2019 when a first review of applicants will be completed. The hiring authority reserves the right to fill this position at any time after that date without notice.

If you have any questions regarding this recruitment, please contact the manager listed in the "Supplemental Information" section of this publication.

Duties

This position serves as the Administrative Assistant to the two (2) Eastern Regional Managers. This position makes decisions and follows-up on outstanding issues on behalf of the two managers on administrative matters. The Administrative Assistant manages the Eastern Region Headquarters buildings and resolves all building related issues. The incumbent will work on assigned program areas, leads, facilitates and represents the region on projects and committees. This position has delegated authority and exercises judgment while maintaining confidentiality as required.

Duties include, but are not limited to:

- Acts as principal assistant to two Regional Managers for the Operations of the Eastern Region of Washington State Parks.
- Acts as the point of contact for operational and highly confidential communications both internally and externally.
- Makes decisions and acts for managers on administrative matters.
- Develops and implements standardized administrative workflow systems for Eastern Region Operations.

Appendix Table 1: The Results of the Regression Analyses on AMCEs (No Interaction)

VARIABLES	Prioritizing Intention for application					
	Condition (1)		Condition (2)		Condition (3)	
Type of Employer (Ref: A for-profit company)						
A public organization within local government	0.05**	(0.02)	0.02	(0.02)	-0.01	(0.02)
Job Title (Ref: Administrative Manager Trainee)						
Management Trainee	0.01	(0.03)	0.04	(0.03)	-0.00	(0.02)
Program Manager Trainee	0.04	(0.03)	0.06**	(0.03)	-0.01	(0.02)
Project Manager Trainee	0.02	(0.03)	0.03	(0.03)	0.02	(0.02)
Where this job information is published (Ref: Job search website)						
Local newspaper	-0.08***	(0.02)	-0.03	(0.02)	-0.02	(0.02)
Social media	-0.09***	(0.02)	-0.03	(0.02)	-0.04	(0.02)
Size of the Organization (Ref: Small)						
Unknown/Not stated			-0.10***	(0.03)	-0.01	(0.03)
Medium			0.03	(0.03)	-0.02	(0.02)
Large			0.01	(0.03)	0.05**	(0.02)
Organizational Values (Ref: Accountability and Reliability)						
Unknown/Not stated			-0.14***	(0.02)	-0.05**	(0.02)
Effectiveness and Efficiency			-0.01	(0.02)	-0.02	(0.02)
Salary (Ref: Slightly below national average)						
Unknown/Not stated					0.07***	(0.03)
Around national average					0.15***	(0.02)
Slightly above national average					0.23***	(0.03)
Benefits (Ref: Medical)						
Unknown/Not stated					-0.06**	(0.02)
Medical, Retirement					0.09***	(0.03)
Medical, Retirement, Dental, Vision					0.22***	(0.03)

Type of Employment (Ref: Contract-basis employment)

Unknown/Not stated	0.02	(0.02)
Permanent employment	0.18***	(0.02)

Job Autonomy (Ref: Low)

Unknown/Not stated	0.05**	(0.03)
Medium	0.08***	(0.02)
High	0.14***	(0.03)

Direct Interaction with Clients/Customers (Ref: Low)

Unknown/Not stated	-0.09***	(0.03)
Medium	-0.07***	(0.02)
High	-0.08***	(0.03)

Constant	0.51***	(0.03)	0.55***	(0.03)	0.29***	(0.05)
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Observations	3,000	3,020	3,030
R-squared	0.01	0.03	0.12

Cluster robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	Prioritizing Intention for application					
	Condition (1)		Condition (2)		Condition (3)	
Type of Employer (Ref: A for-profit company)						
A public organization within local government	0.06	(0.05)	0.05	(0.04)	0.02	(0.04)
Job Title (Ref: Administrative Manager Trainee)						
Management Trainee	-0.08	(0.06)	0.01	(0.05)	0.04	(0.05)
Program Manager Trainee	0.02	(0.05)	0.10*	(0.06)	0.02	(0.05)
Project Manager Trainee	-0.03	(0.05)	0.06	(0.05)	0.02	(0.05)
Where this job information is published (Ref: Job search website)						
Local newspaper	-0.12**	(0.05)	-0.04	(0.04)	-0.03	(0.04)
Social media	-0.16***	(0.04)	-0.12**	(0.05)	-0.04	(0.04)
Size of the Organization (Ref: Small)						
Unknown/Not stated			0.14***	(0.05)	-0.02	(0.05)
Medium			0.17***	(0.05)	-0.01	(0.05)
Large			0.07	(0.05)	0.06	(0.05)
Organizational Values (Ref: Accountability and Reliability)						
Unknown/Not stated			0.10**	(0.04)	0.04	(0.04)
Effectiveness and Efficiency			0.13***	(0.05)	0.05	(0.04)
Salary (Ref: Slightly below national average)						
Unknown/Not stated					-0.09*	(0.05)
Around national average					0.04	(0.04)
Slightly above national average					0.09*	(0.05)
Benefits (Ref: Medical)						
Unknown/Not stated					0.14***	(0.05)
Medical, Retirement					0.21***	(0.05)
Medical, Retirement, Dental, Vision					0.29***	(0.04)
Type of Employment (Ref: Contract-basis employment)						

Unknown/Not stated	0.01	(0.04)
Permanent employment	0.22***	(0.04)
Job Autonomy (Ref: Low)		
Unknown/Not stated	-0.06	(0.05)
Medium	0.04	(0.05)
High	0.09**	(0.04)
Direct Interaction with Clients/Customers (Ref: Low)		
Unknown/Not stated	0.15***	(0.05)
Medium	0.04	(0.05)
High	-0.05	(0.05)

Type of Employer * Risk Aversion

A public organization within local government	-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)
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Job Title * Risk Aversion

Management Trainee	0.01*	(0.00)	0.00	(0.00)	-0.00	(0.00)
Program Manager Trainee	0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)
Project Manager Trainee	0.00	(0.00)	-0.00	(0.00)	0.00	(0.00)

Where this job information is published * Risk Aversion

Local newspaper	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Social media	0.00*	(0.00)	0.01*	(0.00)	0.00	(0.00)

Size of the Organization * Risk Aversion

Unknown/Not stated			-0.00	(0.00)	0.00	(0.00)
Medium			-0.00	(0.00)	0.00	(0.00)
Large			0.00	(0.00)	0.00	(0.00)

Organizational Values * Risk Aversion

Unknown/Not stated			0.00	(0.00)	0.00	(0.00)
Effectiveness and Efficiency			-0.00	(0.00)	-0.00	(0.00)

Salary * Risk Aversion

Unknown/Not stated					0.00	(0.00)
Around national average					0.00	(0.00)
Slightly above national average					0.00	(0.00)

Benefits * Risk Aversion

Unknown/Not stated	-0.01*	(0.00)				
Medical, Retirement	-0.00	(0.00)				
Medical, Retirement, Dental, Vision	-0.00	(0.00)				
Type of Employment * Risk Aversion						
Unknown/Not stated	-0.00	(0.00)				
Permanent employment	-0.00	(0.00)				
Job Autonomy * Risk Aversion						
Unknown/Not stated	0.00	(0.00)				
Medium	-0.00	(0.00)				
High	-0.00	(0.00)				
Direct Interaction with Clients/Customers * Risk Aversion						
Unknown/Not stated	-0.00	(0.00)				
Medium	-0.00	(0.00)				
High	0.00	(0.00)				
PSM	0.00	(0.00)	-0.00	(0.00)	0.00	(0.00)
Risk Aversion	-0.00*	(0.00)	0.00	(0.00)	0.00	(0.00)
Age	0.00	(0.00)	-0.00	(0.00)	-0.00*	(0.00)
Gender	0.00	(0.00)	-0.00	(0.00)	0.01	(0.01)
Race	0.00	(0.00)	-0.00	(0.00)	0.00	(0.01)
Marital Status	0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)
No. of Children	0.00	(0.00)	-0.00	(0.00)	0.00	(0.00)
Education	-0.00	(0.00)	-0.00	(0.00)	0.00	(0.00)
Income	-0.00	(0.00)	0.00	(0.00)	0.01	(0.00)
Current Employment	0.00	(0.00)	0.00	(0.00)	-0.01**	(0.00)
Constant	0.58***	(0.05)	0.32***	(0.06)	0.16*	(0.09)
Observations	3,000		3,020		3,030	
R-squared	0.01		0.03		0.13	

Cluster robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	Prioritizing Intention for application					
	Condition (1)		Condition (2)		Condition (3)	
Type of Employer (Ref: A for-profit company)						
A public organization within local government	-0.18*	(0.02)	-0.13*	(0.08)	-0.06	(0.07)
Job Title (Ref: Administrative Manager Trainee)						
Management Trainee	0.02	(0.11)	0.29***	(0.10)	-0.07	(0.10)
Program Manager Trainee	0.20**	(0.10)	0.06	(0.11)	0.00	(0.10)
Project Manager Trainee	0.04	(0.12)	0.13	(0.10)	-0.19*	(0.11)
Where this job information is published (Ref: Job search website)						
Local newspaper	-0.14	(0.09)	-0.27***	(0.09)	-0.04	(0.08)
Social media	-0.00	(0.09)	-0.30***	(0.09)	0.02	(0.08)
Size of the Organization (Ref: Small)						
Unknown/Not stated			0.05	(0.10)	-0.18*	(0.10)
Medium			0.05	(0.10)	-0.20**	(0.10)
Large			0.19*	(0.11)	-0.08	(0.09)
Organizational Values (Ref: Accountability and Reliability)						
Unknown/Not stated			-0.14	(0.09)	-0.07	(0.09)
Effectiveness and Efficiency			-0.12	(0.09)	0.06	(0.08)
Salary (Ref: Slightly below national average)						
Unknown/Not stated					0.21**	(0.10)
Around national average					0.20*	(0.10)
Slightly above national average					0.26**	(0.11)
Benefits (Ref: Medical)						
Unknown/Not stated					0.06	(0.10)
Medical, Retirement					0.10	(0.10)
Medical, Retirement, Dental, Vision					0.23**	(0.10)
Type of Employment (Ref: Contract-basis employment)						

Unknown/Not stated	0.02	(0.09)
Permanent employment	0.30***	(0.08)
Job Autonomy (Ref: Low)		
Unknown/Not stated	0.20*	(0.11)
Medium	0.21**	(0.10)
High	0.07	(0.09)
Direct Interaction with Clients/Customers (Ref: Low)		
Unknown/Not stated	-0.30***	(0.10)
Medium	-0.23**	(0.10)
High	-0.20*	(0.11)

Type of Employer * PSM

A public organization within local government	0.05***	(0.02)	0.03*	(0.02)	0.01	(0.01)
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Job Title * PSM

Management Trainee	-0.00	(0.02)	-0.06***	(0.02)	0.02	(0.02)
Program Manager Trainee	-0.04*	(0.02)	0.00	(0.02)	-0.00	(0.02)
Project Manager Trainee	-0.00	(0.03)	-0.02	(0.02)	0.05**	(0.02)

Where this job information is published * PSM

Local newspaper	0.01	(0.02)	0.05***	(0.02)	0.00	(0.02)
Social media	-0.02	(0.02)	0.06***	(0.02)	-0.01	(0.02)

Size of the Organization * PSM

Unknown/Not stated			-0.03	(0.02)	0.04*	(0.02)
Medium			-0.00	(0.02)	0.04*	(0.02)
Large			-0.04	(0.02)	0.03	(0.02)

Organizational Values * PSM

Unknown/Not stated			0.00	(0.02)	-0.02	(0.02)
Effectiveness and Efficiency			0.02	(0.02)	-0.03	(0.02)

Salary * PSM

Unknown/Not stated					-0.03	(0.02)
Around national average					-0.01	(0.02)
Slightly above national average					-0.01	(0.02)

Benefits * PSM

Unknown/Not stated	-0.03	(0.02)				
Medical, Retirement	-0.00	(0.02)				
Medical, Retirement, Dental, Vision	-0.00	(0.02)				
Type of Employment * PSM						
Unknown/Not stated	-0.00	(0.02)				
Permanent employment	-0.03	(0.02)				
Job Autonomy * PSM						
Unknown/Not stated	-0.03	(0.02)				
Medium	-0.03	(0.02)				
High	0.02	(0.02)				
Direct Interaction with Clients/Customers * PSM						
Unknown/Not stated	0.05**	(0.02)				
Medium	0.04	(0.02)				
High	0.03	(0.02)				
PSM	-0.01	(0.02)	-0.02	(0.03)	-0.02	(0.04)
Risk Aversion	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Age	0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)
Gender	0.00	(0.00)	-0.00	(0.00)	0.00	(0.01)
Race	-0.00	(0.00)	0.00	(0.00)	-0.00	(0.00)
Marital Status	0.00	(0.00)	0.00	(0.00)	-0.00	(0.00)
No. of Children	-0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Education	-0.00	(0.00)	-0.00	(0.00)	0.00	(0.00)
Income	-0.00	(0.00)	-0.00	(0.00)	0.00	(0.00)
Current Employment	-0.00	(0.00)	0.00	(0.00)	-0.01**	(0.00)
Constant	0.57***	(0.10)	0.65***	(0.12)	0.40**	(0.18)
Observations	3,000		3,020		3,030	
R-squared	0.02		0.04		0.13	

Cluster robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table 4: The Results of Sup-group Analysis (Based on Risk Aversion)

Participants with a higher level of risk aversion (> 1SD)						
VARIABLES	Prioritizing Intention for application					
	Condition (1)		Condition (2)		Condition (3)	
Type of Employer (Ref: A for-profit company)						
A public organization within local government	0.01	(0.06)	0.02	(0.04)	-0.07	(0.05)
Job Title (Ref: Administrative Manager Trainee)						
Management Trainee	0.06	(0.07)	0.09	(0.09)	-0.06	(0.07)
Program Manager Trainee	0.11	(0.07)	0.12	(0.09)	-0.05	(0.08)
Project Manager Trainee	0.09	(0.06)	0.06	(0.07)	0.04	(0.06)
Where this job information is published (Ref: Job search website)						
Local newspaper	-0.04	(0.07)	-0.01	(0.07)	0.03	(0.05)
Social media	-0.07	(0.06)	0.03	(0.07)	-0.04	(0.05)
Size of the Organization (Ref: Small)						
Unknown/Not stated			0.05	(0.06)	0.06	(0.06)
Medium			0.12	(0.08)	-0.02	(0.06)
Large			0.08	(0.07)	0.05	(0.05)
Organizational Values (Ref: Accountability and Reliability)						
Unknown/Not stated			-0.19***	(0.06)	-0.15***	(0.06)
Effectiveness and Efficiency			-0.03	(0.05)	-0.14***	(0.05)
Salary (Ref: Slightly below national average)						
Unknown/Not stated					0.03	(0.06)
Around national average					0.17***	(0.06)
Slightly above national average					0.22***	(0.07)
Benefits (Ref: Medical)						
Unknown/Not stated					0.01	(0.07)
Medical, Retirement					0.04	(0.07)
Medical, Retirement, Dental, Vision					0.24***	(0.08)

Type of Employment (Ref: Contract-basis employment)

Unknown/Not stated	0.05	(0.06)
Permanent employment	0.17***	(0.05)

Job Autonomy (Ref: Low)

Unknown/Not stated	0.09	(0.07)
Medium	0.08	(0.06)
High	0.17**	(0.07)

Direct Interaction with Clients/Customers (Ref: Low)

Unknown/Not stated	-0.07	(0.07)
Medium	-0.04	(0.07)
High	-0.04	(0.07)

Constant	0.47***	(0.07)	0.44***	(0.09)	0.34***	(0.12)
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Observations	470	380	450
R-squared	0.01	0.05	0.16

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Participants with a lower level of risk aversion (< 1SD)

VARIABLES	Prioritizing Intention for application					
	Condition (1)		Condition (2)		Condition (3)	
Type of Employer (Ref: A for-profit company)						
A public organization within local government	0.04	(0.06)	0.06	(0.05)	0.04	(0.05)
Job Title (Ref: Administrative Manager Trainee)						
Management Trainee	-0.07	(0.07)	-0.00	(0.06)	0.03	(0.06)
Program Manager Trainee	0.03	(0.07)	0.00	(0.07)	0.01	(0.06)
Project Manager Trainee	0.01	(0.07)	-0.04	(0.07)	-0.02	(0.08)
Where this job information is published (Ref: Job search website)						
Local newspaper	-0.04	(0.06)	-0.05	(0.06)	0.01	(0.05)
Social media	-0.06	(0.06)	-0.08	(0.07)	-0.08	(0.06)
Size of the Organization (Ref: Small)						
Unknown/Not stated			-0.11*	(0.06)	-0.02	(0.07)
Medium			0.01	(0.06)	0.02	(0.06)
Large			-0.03	(0.08)	0.02	(0.05)
Organizational Values (Ref: Accountability and Reliability)						
Unknown/Not stated			-0.11**	(0.05)	-0.02	(0.06)
Effectiveness and Efficiency			0.01	(0.05)	0.03	(0.05)
Salary (Ref: Slightly below national average)						
Unknown/Not stated					0.10	(0.07)
Around national average					0.16**	(0.06)
Slightly above national average					0.16**	(0.07)
Benefits (Ref: Medical)						
Unknown/Not stated					-0.12**	(0.06)
Medical, Retirement					0.08	(0.06)
Medical, Retirement, Dental, Vision					0.22***	(0.07)
Type of Employment (Ref: Contract-basis employment)						
Unknown/Not stated					-0.06*	(0.04)
Permanent employment					0.16***	(0.05)

Job Autonomy (Ref: Low)

Unknown/Not stated	0.07	(0.06)
Medium	0.04	(0.06)
High	0.22***	(0.06)

Direct Interaction with Clients/Customers (Ref: Low)

Unknown/Not stated	-0.11	(0.07)
Medium	-0.18***	(0.07)
High	-0.22***	(0.07)

Constant	0.52***	(0.07)	0.60***	(0.09)	0.34***	(0.11)
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Observations	590	520	510
R-squared	0.01	0.03	0.17

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table 5: The Results of Sup-group Analysis (Based on PSM)

Participants with a higher level of PSM (> 1SD)

Prioritizing Intention for application						
VARIABLES	Condition (1)		Condition (2)		Condition (3)	
Type of Employer (Ref: A for-profit company)						
A public organization within local government	0.19***	(0.06)	0.09**	(0.04)	-0.00	(0.05)
Job Title (Ref: Administrative Manager Trainee)						
Management Trainee	-0.02	(0.08)	-0.07	(0.06)	-0.00	(0.07)
Program Manager Trainee	-0.01	(0.06)	0.11*	(0.06)	0.07	(0.07)
Project Manager Trainee	-0.00	(0.07)	0.01	(0.06)	0.12	(0.08)
Where this job information is published (Ref: Job search website)						
Local newspaper	-0.06	(0.06)	0.04	(0.05)	0.06	(0.05)
Social media	-0.14**	(0.06)	0.10**	(0.05)	-0.01	(0.06)
Size of the Organization (Ref: Small)						
Unknown/Not stated			-0.10	(0.06)	0.01	(0.06)
Medium			0.02	(0.06)	-0.01	(0.08)
Large			-0.02	(0.07)	0.06	(0.07)
Organizational Values (Ref: Accountability and Reliability)						
Unknown/Not stated			-0.13**	(0.05)	-0.03	(0.05)
Effectiveness and Efficiency			0.05	(0.05)	-0.08	(0.06)
Salary (Ref: Slightly below national average)						
Unknown/Not stated					-0.02	(0.08)
Around national average					0.21***	(0.08)
Slightly above national average					0.27***	(0.08)
Benefits (Ref: Medical)						
Unknown/Not stated					-0.13*	(0.07)
Medical, Retirement					0.09	(0.07)
Medical, Retirement, Dental, Vision					0.20***	(0.07)

Type of Employment (Ref: Contract-basis employment)

Unknown/Not stated	0.00	(0.06)
Permanent employment	0.12*	(0.06)

Job Autonomy (Ref: Low)

Unknown/Not stated	0.05	(0.07)
Medium	0.07	(0.06)
High	0.24***	(0.07)

Direct Interaction with Clients/Customers (Ref: Low)

Unknown/Not stated	-0.03	(0.08)
Medium	-0.03	(0.07)
High	-0.02	(0.09)

Constant	0.49***	(0.08)	0.46***	(0.07)	0.19	(0.12)
-----------------	---------	--------	---------	--------	------	--------

Observations	510	650	390
R-squared	0.05	0.06	0.21

Cluster robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Participants with a lower level of PSM (< 1SD)

VARIABLES	Prioritizing Intention for application					
	Condition (1)		Condition (2)		Condition (3)	
Type of Employer (Ref: A for-profit company)						
A public organization within local government	0.04	(0.06)	0.00	(0.06)	-0.05	(0.05)
Job Title (Ref: Administrative Manager Trainee)						
Management Trainee	0.01	(0.08)	0.14**	(0.07)	-0.06	(0.07)
Program Manager Trainee	0.14**	(0.07)	0.11	(0.07)	-0.01	(0.07)
Project Manager Trainee	-0.01	(0.08)	0.15**	(0.06)	-0.07	(0.07)
Where this job information is published (Ref: Job search website)						
Local newspaper	-0.12*	(0.06)	-0.19***	(0.06)	-0.04	(0.06)
Social media	-0.02	(0.06)	-0.16**	(0.06)	-0.05	(0.06)
Size of the Organization (Ref: Small)						
Unknown/Not stated			0.02	(0.07)	-0.11*	(0.06)
Medium			0.05	(0.06)	-0.09	(0.06)
Large			0.09	(0.07)	-0.01	(0.05)
Organizational Values (Ref: Accountability and Reliability)						
Unknown/Not stated			-0.16**	(0.06)	-0.07	(0.06)
Effectiveness and Efficiency			-0.07	(0.07)	0.04	(0.06)
Salary (Ref: Slightly below national average)						
Unknown/Not stated					0.10	(0.07)
Around national average					0.17**	(0.07)
Slightly above national average					0.29***	(0.08)
Benefits (Ref: Medical)						
Unknown/Not stated					0.01	(0.08)
Medical, Retirement					0.12	(0.09)
Medical, Retirement, Dental, Vision					0.30***	(0.07)
Type of Employment (Ref: Contract-basis employment)						
Unknown/Not stated					-0.00	(0.06)
Permanent employment					0.18***	(0.05)

Job Autonomy (Ref: Low)

Unknown/Not stated	0.16**	(0.07)
Medium	0.17**	(0.07)
High	0.10*	(0.06)

Direct Interaction with Clients/Customers (Ref: Low)

Unknown/Not stated	-0.19***	(0.06)
Medium	-0.19**	(0.07)
High	-0.16**	(0.07)

Constant	0.48***	(0.06)	0.57***	(0.09)	0.35**	(0.14)
-----------------	---------	--------	---------	--------	--------	--------

Observations	460	420	390
R-squared	0.03	0.06	0.20

Cluster robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Full Questionnaire (Essay 2)

Warning!

This survey uses a protocol to check that you are responding from inside the U.S. and not using a Virtual Private Server (VPS), Virtual Private Network (VPN), or proxy to hide your country. In order to take this survey, please turn off your VPS/VPN/proxy if you are using one and also any ad blocking applications. Failure to do this might prevent you from completing the HIT.

For more information on why we are requesting this, see this post from TurkPrime (<https://goo.gl/WD6QD4>)

VPS Our system has detected that you are using a Virtual Private Server (VPS) or proxy to mask your country location. As has been widely reported, this has caused a number of problems with MTurk data (<https://goo.gl/WD6QD4>).

Because of this, we cannot let you participate in this study. If you are located in the U.S., please turn off your VPS the next time you participate in a survey-based HIT, as we requested in the warning message at the beginning. If you are outside the U.S., we apologize, but this study is directed only towards U.S. participants.

Thank you for your interest in our study.

Our system has detected that you are attempting to take this survey from a location outside of the U.S. Unfortunately, this study is directed only towards participants in the U.S. and we cannot accept responses from those in other countries (as per our IRB protocol).

Thank you for your interest in our study.

WID For some reason we were still unable to verify your country location. We ask you to please assist us in getting this protocol correct. Please enter your MTurk worker ID below and contact the requester for this HIT to report the problem.

Once you click Next, you will be taken to the survey (and certifying that you are taking this survey from the U.S. and not using a VPS). We will be checking locations manually for those who reach this point and you will be contacted if this check identifies you as violating these requirements.

C1 Before you proceed to the survey, please complete the captcha below.

This study consists of two separate tasks. In each task, you will be given a hypothetical scenario in which you are asked to make choices between two options. You will be asked to make **five** decisions in each task.

A new task begins on the next page...

Task 1 - Instruction

Please imagine a situation where you can choose between:

- 1) A **draw**, where you would have an equal chance of getting **450 U.S. dollars** or getting **0 U.S. dollar**; OR
- 2) A **sure** payment of a particular amount of money

We will present you with **five** different situations where you need to make the choices.

Do you understand the instruction above?

☐ Yes (1)

☐ No (2)

Skip To: End of Block If in 1.2 = Yes

Page Break

Please read again carefully...

Task 1 - Instruction

Please imagine a situation where you can choose between:

- 1) A **draw**, where you would have an equal chance of getting **450 U.S. dollars** or getting **0 U.S. dollar**; OR
- 2) A **sure** payment of a particular amount of money

We will present you with **five** different situations where you need to make the choices.

Do you understand the instruction above?

- ☐ Yes (1)
- ☐ No, and QUIT the survey (2)

Skip To: End of Survey If in1.5 != Yes

What would you prefer:

- 1) A draw with a 50-percent chance of receiving **450 U.S. dollars** and a 50-percent chance of receiving **0 U.S. dollar**, OR
- 2) A sure payment of **240 U.S. dollars**?

- ☐ 50/50 chance (1)
- ☐ Sure payment (2)

See the skip logic presented in the Note below

What would you prefer:

1) A draw with a 50-percent chance of receiving **450 U.S. dollars** and a 50-percent chance of receiving **0 U.S. dollar**, OR

2) A sure payment of **XXX U.S. dollars?**

☐ 50/50 chance (1)

☐ Sure payment (2)

See the skip logic presented in the Note below

What would you prefer:

1) A draw with a 50-percent chance of receiving **450 U.S. dollars** and a 50-percent chance of receiving **0 U.S. dollar**, OR

2) A sure payment of **XXX U.S. dollars?**

☐ 50/50 chance (1)

☐ Sure payment (2)

See the skip logic presented in the Note below

What would you prefer:

1) A draw with a 50-percent chance of receiving **450 U.S. dollars** and a 50-percent chance of receiving **0 U.S. dollar**, OR

2) A sure payment of **XXX U.S. dollars?**

☐ 50/50 chance (1)

☐ Sure payment (2)

See the skip logic presented in the Note below

What would you prefer:

1) A draw with a 50-percent chance of receiving 450 U.S. dollars and a 50-percent chance of receiving 0 U.S. dollar, OR

2) A sure payment of XXX U.S. dollars?

☐ 50/50 chance (1)

☐ Sure payment (2)

Only click on the point at the bottom left corner of this page. Do NOT move the slider labeled 0-10.

This is just to screen out random clicking.

Very rarely

Very frequently

0 1 2 3 4 5 6 7 8 9 10

()



SB2 Thank you for completing the first task. A new task begins on the next page...

Version 1 of 4 (randomized)

Task 2 - Instruction

Please imagine in the following that you are a resident of **Riverside**, a hypothetical city in the U.S. You have just graduated from college and you are now searching for a job in the field of **health services** in Riverside.

On the next few pages, you will see the information about some jobs. Please read the information carefully and choose the job you would apply to. You will be asked to make **five** choices.

Version 2 of 4 (randomized)

Task 2 - Instruction

Please imagine in the following that you are a resident of **Riverside**, a hypothetical city in the U.S. You have just graduated from college and you are now searching for a job in the field of **education** in Riverside.

On the next few pages, you will see the information about some jobs. Please read the information carefully and choose the job you would apply to. You will be asked to make **five** choices.

Version 3 of 4 (randomized)

Task 2 - Instruction

Please imagine in the following that you are a resident of **Riverside**, a hypothetical city in the U.S. You have just graduated from college and you are now searching for a job in the field of **transportation and utilities** in Riverside.

On the next few pages, you will see the information about some jobs. Please read the information carefully and choose the job you would apply to. You will be asked to make **five** choices.

Version 4 of 4 (randomized)

Task 2 - Instruction

Please imagine in the following that you are a resident of **Riverside**, a hypothetical city in the U.S. You have just graduated from college and you are now searching for a job in Riverside.

On the next few pages, you will see the information about some jobs. Please read the information carefully and choose the job you would apply to. You will be asked to make **five** choices.

The Definition of Special Terms

During the task, you can see the sign [\[?\]](#) being placed next to some terms. You can check the definition of these terms by clicking on or moving your mouse over the sign [\[?\]](#).

in2.6 Do you understand the instructions above?

☐ Yes (1)

☐ No (2)

(Please read again carefully)

Version 1 of 4 (randomized)

Task 2 - Instruction

Please imagine in the following that you are a resident of **Riverside**, a hypothetical city in the U.S. You have just graduated from college and you are now searching for a job in the field of **health services** in Riverside.

On the next few pages, you will see the information about some jobs. Please read the information carefully and choose the job you would apply to. You will be asked to make **five** choices.

Version 2 of 4 (randomized)

Task 2 - Instruction

Please imagine in the following that you are a resident of **Riverside**, a hypothetical city in the U.S. You have just graduated from college and you are now searching for a job in the field of **education** in Riverside.

On the next few pages, you will see the information about some jobs. Please read the information carefully and choose the job you would apply to. You will be asked to make **five** choices.

Version 3 of 4 (randomized)

Task 2 - Instruction

Please imagine in the following that you are a resident of **Riverside**, a hypothetical city in the U.S. You have just graduated from college and you are now searching for a job in the field of **transportation and utilities** in Riverside.

On the next few pages, you will see the information about some jobs. Please read the information carefully and choose the job you would apply to. You will be asked to make **five** choices.

Version 4 of 4 (randomized)

Task Instruction

Please imagine in the following that you are a resident of **Riverside**, a hypothetical city in the U.S. You have just graduated from college and you are now searching for a job in Riverside.

On the next few pages, you will see the information about some jobs. Please read the information carefully and choose the job you would apply to. You will be asked to make **five** choices.

The Definition of Special Terms

During the task, you can see the sign [\[?\]](#) being placed next to some terms. You can check the definition of these terms by clicking on or moving your mouse over the sign [\[?\]](#).

Do you understand the instructions above?

- ☐ Yes (1)
- ☐ No, and QUIT the survey (2)

Skip To: End of Survey If Q15 != Yes

Information Condition 1 (Between Group Randomization)

(1/5)

Please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

☐ Absolutely not attractive 1 (1)

☐ 2 (2)

☐ 3 (3)

☐ 4 (4)

☐ 5 (5)

☐ 6 (6)

☐ Extremely attractive 7 (7)

s1.1.5 Using the same scale, how would you rate **Job B**?

☐ Absolutely not attractive 1 (1)

☐ 2 (2)

☐ 3 (3)

☐ 4 (4)

☐ 5 (5)

☐ 6 (6)

☐ Extremely attractive 7 (7)

(2/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(3/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(4/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(5/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

Information Condition 2
(Between Group Randomization)

(1/5)

Please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values

(The presentation order of the last two attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(2/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values

(The presentation order of the last two attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(3/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values

(The presentation order of the last two attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(4/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values

(The presentation order of the last two attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(5/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values

(The presentation order of the last two attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

Information Condition 3
(Between Group Randomization)

(1/5)

Please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Title Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values
Salary	Randomized Values	Randomized Values
Benefits	Randomized Values	Randomized Values
Type of Employment	Randomized Values	Randomized Values
Job Autonomy	Randomized Values	Randomized Values
Direct Interaction with Clients/Customers	Randomized Values	Randomized Values

(The presentation order of the last seven attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

☐ Absolutely not attractive 1 (1)

☐ 2 (2)

☐ 3 (3)

☐ 4 (4)

☐ 5 (5)

☐ 6 (6)

☐ Extremely attractive 7 (7)

s1.1.5 Using the same scale, how would you rate **Job B**?

☐ Absolutely not attractive 1 (1)

☐ 2 (2)

☐ 3 (3)

☐ 4 (4)

☐ 5 (5)

☐ 6 (6)

☐ Extremely attractive 7 (7)

(2/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Title Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values
Salary	Randomized Values	Randomized Values
Benefits	Randomized Values	Randomized Values
Type of Employment	Randomized Values	Randomized Values
Job Autonomy	Randomized Values	Randomized Values
Direct Interaction with Clients/Customers	Randomized Values	Randomized Values

(The presentation order of the last seven attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(3/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Title Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values
Salary	Randomized Values	Randomized Values
Benefits	Randomized Values	Randomized Values
Type of Employment	Randomized Values	Randomized Values
Job Autonomy	Randomized Values	Randomized Values
Direct Interaction with Clients/Customers	Randomized Values	Randomized Values

(The presentation order of the last seven attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(4/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Title Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values
Salary	Randomized Values	Randomized Values
Benefits	Randomized Values	Randomized Values
Type of Employment	Randomized Values	Randomized Values
Job Autonomy	Randomized Values	Randomized Values
Direct Interaction with Clients/Customers	Randomized Values	Randomized Values

(The presentation order of the last seven attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

s1.1.5 Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

(5/5)

Again, please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Randomized Values	Randomized Values
Title Type of Employer	Randomized Values	Randomized Values
Where this job information is published	Randomized Values	Randomized Values
Organizational Values	Randomized Values	Randomized Values
Size of the Organization	Randomized Values	Randomized Values
Salary	Randomized Values	Randomized Values
Benefits	Randomized Values	Randomized Values
Type of Employment	Randomized Values	Randomized Values
Job Autonomy	Randomized Values	Randomized Values
Direct Interaction with Clients/Customers	Randomized Values	Randomized Values

(The presentation order of the last seven attributes was randomized)

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A (1)

☐ Job B (2)

On a scale from 1 to 7, where 1 indicates that you find the job absolutely not attractive and 7 indicates that you find the job extremely attractive, how would you rate **Job A**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

Using the same scale, how would you rate **Job B**?

- ☐ Absolutely not attractive 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 (6)
 - ☐ Extremely attractive 7 (7)
-

Thank you for completing the tasks! Now we are going to ask you a last couple of questions about yourself.

What is your age? (in years)

Are you ...

☐ Female (1)

☐ Male (2)

Do you consider yourself to be primarily ...

☐ White (1)

☐ Black or African American (2)

☐ Hispanic or Latino (of any race) (3)

☐ Asian or Pacific Islander (4)

☐ Other (5) _____

What is your marital status?

- ☐ Single, never married (1)
 - ☐ Married or domestic partnership (2)
 - ☐ Widowed (3)
 - ☐ Divorced (4)
 - ☐ Separated (5)
-

How many children do you have?

- ☐ 0 (1)
- ☐ 1 (2)
- ☐ 2 (3)
- ☐ 3 (4)
- ☐ 4+ (5)

What is the highest level of education you have completed?

- ☐ Less than High School (1)
 - ☐ High School / GED (2)
 - ☐ Vocational or Technical Training (3)
 - ☐ Some College - NO degree (4)
 - ☐ 2-year College / Associate's Degree (5)
 - ☐ Bachelor's Degree (6)
 - ☐ Master's degree (7)
 - ☐ Doctorate / PhD / JD(Law) / MD (8)
-

Last year, what was your total income from all sources, before tax?

- ☐ Less than \$24,999 (1)
 - ☐ \$25,000 to under \$49,999 (2)
 - ☐ \$50,000 to under \$74,999 (3)
 - ☐ \$75,000 or more (4)
-

Where do you currently work?

- ☐ Local, state, or federal government (1)
- ☐ Nonprofit organization (2)
- ☐ Private company or business (3)
- ☐ Independent consulting or self-employed (4)
- ☐ Not currently working (5)
- ☐ Retired (6)
- ☐ Student (7)
- ☐ Other (specify) (8) _____

Display This Question:

If d9 = Local, state, or federal government

Or d9 = Nonprofit organization

Or d9 = Private company or business

Which of the following best describes your current management responsibilities?

- ☐ Top manager (1)
 - ☐ Middle manager (2)
 - ☐ Team leader (3)
 - ☐ Supervisor (4)
 - ☐ None (not a manager or supervisor) (5)
-

Display This Question:

If d9 = Local, state, or federal government

Or d9 = Nonprofit organization

Or d9 = Private company or business

How long have you held this position?

- ☐ Less than 1 year (1)
- ☐ 1-3 years (2)
- ☐ 4-5 years (3)
- ☐ 6-10 years (4)
- ☐ 11-20 years (5)
- ☐ More than 20 years (6)

In general, how willing are you to take risks?

Not at all willing to take risks Very willing to take risks

0 1 2 3 4 5 6 7 8 9 10

()



Please rate your level of agreement with the following statements:

Meaningful public service is very important to me.

- ☐ Strongly disagree (1) (1)
- ☐ (2) (2)
- ☐ (3) (3)
- ☐ (4) (4)
- ☐ (5) (5)
- ☐ (6) (6)
- ☐ Strongly agree (7) (7)

I am often reminded by daily events about how dependent we are on one another.

- ☐ Strongly disagree (1) (1)
 - ☐ (2) (2)
 - ☐ (3) (3)
 - ☐ (4) (4)
 - ☐ (5) (5)
 - ☐ (6) (6)
 - ☐ Strongly agree (7) (7)
-

Making a difference in society means more to me than personal achievements.

- ☐ Strongly disagree (1) (1)
 - ☐ (2) (2)
 - ☐ (3) (3)
 - ☐ (4) (4)
 - ☐ (5) (5)
 - ☐ (6) (6)
 - ☐ Strongly agree (7) (7)
-

I am prepared to make enormous sacrifices for the good of society.

- ☐ Strongly disagree (1) (1)
 - ☐ (2) (2)
 - ☐ (3) (3)
 - ☐ (4) (4)
 - ☐ (5) (5)
 - ☐ (6) (6)
 - ☐ Strongly agree (7) (7)
-

I am not afraid to go to bat for the rights of others even if it means I will be ridiculed.

☐ Strongly disagree (1) (1)

☐ (2) (2)

☐ (3) (3)

☐ (4) (4)

☐ (5) (5)

☐ (6) (6)

☐ Strongly agree (7) (7)

c1 Do you have any comments or suggestions about this survey? (Optional)

(Below are two examples of how a conjoint table looked like in information condition 2)

(1/5)

Please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Administrative Manager Trainee	Administrative Manager Trainee
Type of Employer	A public organization within local government	A public organization within local government
Where this job information is published	Social media	Job search website
Size of the Organization	Large ^[2]	Small ^[2]
Organizational Values ^[2]	Unknown / Not stated	Unknown / Not stated

If you had to choose between them, which of these two jobs would you prioritize applying to?

- ☐ Job A
- ☐ Job B

(1/5)

Please imagine you are a resident of Riverside and just graduated from college. You are now looking for a job here. While searching for jobs, you find two job advertisements in Riverside.

Please read the descriptions of two jobs carefully. Then, please indicate which of the two you would prefer to apply to:

	Job A	Job B
Job Title	Project Manager Trainee	Management Trainee
Type of Employer	A public organization within local government	A public organization within local government
Where this job information is published	Job search website	Local newspaper
Organizational Values ^[2]	Effectiveness ^[2] and Efficiency ^[2]	Effectiveness ^[2] and Efficiency ^[2]
Size of the Organization	Unknown / Not stated	Large ^[2]

If you had to choose between them, which of these two jobs would you prioritize applying to?

☐ Job A

☐ Job B

Note

Hypothetical lottery choice task (Falk et al. 2018)

In this task, participants were presented with a series of five binary choices. Choices were between a fixed lottery, in which the participant could win \$450 USD or \$0 USD, and varying sure payments, of which the amount were between \$15 to \$465 USD (**see the information in the picture below**). Choice of the lottery resulted in an increase of the sure amount being offered in the next question, and vice. Participants' responses to this lottery task have 32 possible outcomes. These outcomes were converted to a risk aversion scale ranging from 1 to 32. A lower score in this scale indicates a lower likelihood to take risks and a higher level of risk aversion.

Situation	Decision	Situation	Decision	Situation	Decision	Situation	Decision	Situation	Decision	Outcome
\$240	50/50	\$360	50/50	\$420	50/50	\$450	50/50	\$465	50/50	32
									Sure	31
									Sure	30
									Sure	29
									Sure	28
									Sure	27
									Sure	26
									Sure	25
									Sure	24
									Sure	23
									50/50	22
									Sure	21
									Sure	20
									Sure	19
									Sure	18
									Sure	17
									Sure	16
									Sure	15
									Sure	14
									Sure	13
									50/50	12
									Sure	11
									Sure	10
									Sure	9
									Sure	8
									Sure	7
									Sure	6
									Sure	5
									Sure	4
									Sure	3
									50/50	2
									Sure	1

	Sure	\$120	50/50	\$180	50/50	\$210	50/50	\$225	50/50	16
								Sure	15	
							Sure	\$195	50/50	14
								Sure	13	
					Sure	\$150	50/50	\$165	50/50	12
								Sure	11	
							Sure	\$135	50/50	10
								Sure	9	
			Sure	\$60	50/50	\$90	50/50	\$105	50/50	8
								Sure	7	
							Sure	\$75	50/50	6
								Sure	5	
					Sure	\$30	50/50	\$45	50/50	4
								Sure	3	
							Sure	\$15	50/50	2
								Sure	1	