Risk and Decision Making by Public Versus Private Managers: An Exploration of Framing Effects and the Status Quo Bias

Abstract

Modern reforms often borrow motivation or mechanisms from the private sector to incentivize public managers to be more innovative and accepting of risk. The longstanding assumption is that public employees are more risk averse. Yet, we know relatively little about the degree to which public and private managers differ in terms of their orientations towards risk. To begin addressing this gap, we field three previously validated experiments designed to assess framing effects and status quo bias in a panel of public and private sector managers. Our results do not indicate that public sector managers are systematically more risk averse or anchored to the status quo than private sector managers. In fact, our results suggest the opposite. Interestingly, our results suggest public service motivation may help to explain these differences. We conclude with a discussion of the implications of these results for modern public management reforms.

Introduction

Modern public management reform efforts borrow heavily from the private sector and often focus on incentivizing public managers to be more entrepreneurial and more receptive to innovation. The underlying assumption of this approach is that incentive schemes that encourage these behaviors in the private sector will have a similar effect on public managers. However, even though these reforms are intended to increasing risk taking among public sector employees and managers (Sanger and Levin 1992; Hood, 1995; Lane, 2000; Pollitt and Bouckaert, 2011), existing research has taught us very little about the risk preferences of this specific set of decision makers. Questions such as the degree to which public decision maker are more or less risk averse, or adhere more or less closely to descriptive theories of risky choice than their private sector counter parts remain unanswered. These answers have significant implications for the success of modern reform prescriptions that borrow heavily from the private sector.

This study begins to explore this topic by focusing on two types of cognitive bias that influence choices among risky alternatives, including framing effects the status quo bias. The first refers to the well-documented observation that people tend to exhibit greater loss aversion when asked to choose among negatively framed outcomes. The latter is the equally well-validated finding that decision makers disproportionately stick with the current state of affairs when given a choice between the status quo and some alternative. Both can, obviously, have a significant effect on the willingness of managers to be more entrepreneurial or to embrace different ways of doing their jobs. Drawing on literature from psychology we develop the expectation that public managers may be more susceptible to framing effects than are private managers, but that the differences can be explained by different levels of public service motivation among these groups. We also hypothesize that private managers will exhibit greater

status quo bias than managers from the private sector and that the differences are due to higher levels of ambiguity aversion in the former group.

We use experimental methods to test these expectations using a panel of 150 public and 150 private managers. Specifically, we administered widely used experiments meant to detect framing effects (Tversky & Kahneman 1981) and status quo bias (Samuelson and Zeckhauser 1988). Additionally, to test our key hypotheses about the mediating effect of public service motivation and ambiguity aversion, the instrument also included previously validated batteries of questions designed to measure these concepts. Before fielding the instrument with actual managers from the two sectors we ran a pilot in Prolific, an online behavioral research platform similar to Amazon's Mechanical Turk. This allowed us to pre-test the experimental manipulations and the predictive power of the PSM scale.

Research on Risk Preferences in the Public Sector

A growing body of work has begun to examine risk-taking by public managers and employees, but ultimately provides very little information about the risk preferences of these actors. Scholars have suggested that public sector actors are more risk averse than their private sector counterparts. Studies using self-reported risk tolerance find that public sector employees score significantly lower than private sector employees (Hartog et al. 2002; Guiso and Paiella 2008). In a study of public and private sector employees in the Netherlands, Buurman et al. (2012) provide experimental evidence that the former are more risk averse than the latter. These authors find that this is particularly true among those with higher public service motivation.

A series of studies have suggested that risk-aversion may not only arise from the conditions of public sector employment, but also be a predictor of selecting into government.

Luechinger, Stutzer, and Winkelmann (2007) find that sector selection on unobservables is reduced after controlling for preferences towards risk taking. The authors explain this finding by suggesting that public jobs have higher security and that risk averse persons prefer that security over the wage premium in private sector jobs (Bellante and Link, 1981). In recent work analyzing existing data and utilizing an experimental approach, Pfeifer (2011) confirms that risk averse individuals are more likely to select into government and demand a higher wage premium to accept the insecurity of private sector employment.

However, another body of work has challenged the correlation between risk aversion and government employment. Through a review of risk taking in scholarly studies, Bozeman and Kingsley (1998) suggest that there is little difference in risk aversion across the sectors. Similarly, studies using stated preferences about job security find limited evidence regarding differences among the sectors (see e.g. Rainey 1982, Crew son 1997, and Lewis and Frank 2002).

Other studies have also sought to understand the *conditions* under which public employees take greater risks. These have demonstrated that hierarchy and red tape are negatively correlated with risk-taking among public managers, while employee-supervisor trust is positively associated (Turaga and Bozeman 2005; Nyhan 2000). Horace et al. (1999) find that entrepreneurship in public organizations, including risk-taking behavior, is often a strategic response to environmental turbulence. Studies have shown that the attitude of senior management towards change and risk taking is a good predictor of innovative behavior in public organizations (Damanpour 1991; Vigoda-Gadot et al. 2005; Vigoda-Gadot 2009). The UK government has found that clear performance targets linked to sanctions or rewards may induce more risk-taking among public employees and managers (NAO 2006). In a related study, Kim

(2009) finds that pay-for-performance schemes, which have shown very inconsistent results in public organizations, do correlate positively with performance when employees believe that they are allowed to take risks necessary to improve outcomes.

Very recently, a small handful of studies have sought to understand the relationship between performance and the willingness to take risks. Most of these draw heavily on the behavioral theory of the firm (Cyert and March 1963), suggesting that organizations are more willing to look for innovative or new solutions when performance falls below target levels. Salge (2011) finds that, in a sample of English hospitals, performance feedback is correlated with innovativeness. At the individual level, Nielsen (2014) finds that negative performance information induces Danish school principals to reorder the multiple goals that their organizations are asked to pursue, emphasizing areas in which they are doing particularly poorly. Meier et al. (2015) build a theory that imagines performance as a key driver of decision making by public managers. Specifically, the authors take a Bayesian approach in which the distance between current performance and the manager's prior regarding acceptable performance shapes the choices they make regarding prospector (aggressive) versus defender (protectionist) strategies. Finally, Nicholson-Crotty et al. (2016) show that performance relative to a predefined reference point is a significant predictor of innovation and other risk-taking behavior in public sector organizations (Nicholson-Crotty et al. 2016). These studies suggest that public sector risk preferences may be accurately described by prospect theory. They are, however, primarily observational and focused at the organizational level and, thus, limited in their ability to tell us about risky choice by individuals in the public sector.

Framing Effects and Status Quo Bias in the Pubic vs. the Private Sector

Based on the existing literature, we believe questions about the comparability and character of risk preferences between public and private sector actors remain unanswered. This section describes two cognitive biases and our expectations regarding differences in the degree to which public and private managers exhibit them. We focus on these because each has significant implications for risky choice (Kahneman, Knetch, Thaler 1991) and, thus, has significant implications for the ways in which decision makers respond to reforms designed to incentivize increased risk taking. Additionally, both are well documented in experimental studies and assumed to accurately describe the decision processes of a large majority of people, making them a challenging place to test for differences between managers in the public versus the private sector.

Framing Effects

Framing effects occur because of a systematic violation of the invariance axiom under Expected Utility Theory. This axiom suggests that decision makers should be indifferent to equivalent choices regardless of whether outcomes are framed positively or negatively. Considerable research has demonstrated, however, that decision makers are consistently more risk seeking when presented with an outcome framed as a loss relative to an equivalent outcome framed as a gain (see Kühberger 1998 for a review). In the initial experiment to investigate adherence to the axiom Tversky & Kahneman (1985) ask decision makers to select a course of action to combat a disease that will take 600 lives if nothing is done, they demonstrate that preferences are risk averse when subjects are given a choice between a 100% chance to *save* 200 lives versus a 1/3 probability of saving 600 lives and a 2/3 probability of saving none. Alternatively, preferences are risk seeking when subjects are given the choice between a 100%

chance of 400 people *dying* versus a 1/3 chance that nobody will die and a 2/3 chance that all 600 will die.

The framing effect revealed by the Asian Disease Problem has been shown to be sensitive to the scale presented to subjects (see for example Chui 2003). Additionally, it has been challenged by an "equate-to-differentiate" model as simply a choice between the best possible outcomes or a choice between the worst possible outcomes determined by the perceived difference between those (see for example Li and Xie 2006). In general, however, the Problem and the framing effect that it uncovers have been widely replicated and validated.

While framing effects are widely observed, there are reasons to believe that these effects may differ somewhat between public and private sector actors. In part this is because, existing work on suggests that altruism can significantly increase loss aversion when people make choices that affect the welfare of others (Crockett, M. J. et al. 2014). More specifically, higher levels of altruism make people even more risk seeking when choosing among outcomes framed as a loss for others.

Public Service Motivation, a concept used to explain the selection of employees into public sector jobs despite lower extrinsic rewards relative to the private sector, is closely related to altruism. Specifically, it is defined as a "general, altruistic motivation to serve the interests of a community of people, a state, a nation, or humankind" (Rainey and Steinbauer 1999) and numerous authors have identified generalized altruism as an important component of PSM (see Perry, Hondeghem, and Wise 2010). Somewhat unsurprisingly, work on behavior of public employees has demonstrated empirically that these actors have higher levels of "public service motivation" (PSM) than their private sector counterparts.

Thus, the research suggests that 1) decision makers with higher levels of public service motivation should be relatively more risk seeking when facing choices where the outcomes for others that are framed negatively and 2) public sector workers exhibit higher PSM. As a result, we expect that public managers will be more responsive to framing effects than their private sector counterparts, but that observed differences will be mediated by differences in PSM between members of the two groups.

Status Quo Bias

The status quo bias is a widely observed phenomenon where decision makers exhibit a strong preference for the current state of affairs (Samuelson and Zeckhauser 1988; Nicolle et al. 2011). Like framing effects, the preference is closely related to the more general phenomenon of loss aversion, where a potential loss relative to a predetermined reference point is weighted more heavily than a potential gain. Similarly, the potential disadvantages of changing the current state of affairs loom larger than the potential advantages for most decision makers. Research suggests that this is due in part to the fact that decision makers have higher certainty regarding outcomes of the status quo prospect (See Martin 2017; Weyman and Barnett 2016).

There is a strong popular conception that individuals in government are more anchored to the status quo, and more resistant to innovation, than individuals in the private sector. However, there are few strong theoretical reasons to expect difference. Things like the number of available alternatives (Jacoby et al 1974), complexity of choice (Boxall et al. 2009), and the cognitive energy of the decision maker (Eidelman & Crandall, 2009) have been shown to influence the degree of status quo bias in decisions, but there is little reason to believe that these things will vary between public and private sector actors. As such, we do not expect significant differences between public and private sector managers in exhibiting status quo bias.

Experiments and Panel

To test these expectations, we conduct a set of experiments to detect framing effects and status quo bias and also collect information on Public Service Motivation in a sample of 150 public and 150 private sector managers. We use Qualtrics to pull the panel, including only subjects that hold the title "manager" and have significant work experience and decision making authority within their organizations. We also ask subjects a series of questions about personal characteristics and work experience which we use as pretreatment controls in subsequent analyses. Subjects are randomly sorted into different conditions for all manipulations described below.

To test framing effects, we use the classic Asian Disease Problem developed by Kahneman and Tversky. Specifically, subjects are asked to:

> "Imagine that the U.S. is preparing for the outbreak of an unusual disease, which is expected to kill 600 people if nothing is done. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimate of the consequences of the programs are as follows:"

In the first condition, subjects are asked to choose between Program A which will save 200 people and Program B in which there is a 1/3 probability that 600 people will be saved, and 2/3 probability that no people will be saved. In Condition 2, subjects are told that if Program A is adopted, 400 people will die, while if Program B is adopted, there is a 1/3 probability that nobody will die, and 2/3 probability that 600 people will die.

To test for status quo bias, we use two experiments, both slight variants of experiments developed by Burmeister and Schnade (2007) in order to test for differences in status quo bias between entrepreneurs and other business professionals. Those authors' experiments were,

themselves, heavily modeled on the original status quo bias experiments developed by Samuelson and Zeckhauser. In the first, subjects are presented with a vignette which reads:

> "In order to increase efficiency, you have decided that you need to optimize your unit's internal workflows. Therefore, you need a software solution and after some market research you consider three packages. Switching from your old software to any of the new solutions implies switching costs which are the same for three all solutions: A, B, and C. Which of the following software packages would you purchase?"

In the neutral treatment, no current software provider is identified. In other treatments, subjects are told "Your company is currently using an older version of software package {A, B, or C}, which does not comply with the present requirements anymore." They are then presented with the following options:

- You decide in favor of software package A. It is relatively expensive but very flexible and will also meet future requirements.
- You decide in favor of software package B. It has a medium price and wholly meets all present requirements.
- You decide in favor of software package C. It has a relatively low price and meets most present requirements but with a few acceptable flaws.

In the second status quo bias experiment, subjects are presented with a vignette that reads:

> Your unit has issued an RFP for the collection and analysis of data on regulatory impact and compliance. This a competitive bid and you will award the contract to the proposal with the most attractive offer. You have the capacity to do the analysis on your own, but it would cost you about $10,000 and take about 1 month to complete. As it turns out, you have worked with all three groups that submit a proposal before, so you can derive probabilities for how likely they are to complete the work on the promised date. Which proposal will you accept?

The neutral treatment contains no reference to the amount the unit expects to save when contracting out, while the other treatments include the line "In the past, you have sought a

{15%; 20%; 25%} savings on contract versus in-house work to cover the cost of contract monitoring." Subjects are then presented with the following response options:

- You accept the bid for $8500 from an organization that you believe has a 70% chance of completing the work in 1 month as promised.
- You accept the bid for $8000 from an organization that you believe has a 60% chance of completing the work in 1 month as promised.
- You accept the bid for $7500 from an organization that you believe has a 50% chance of completing the work in 1 month as promised

To measure Public Service Motivation, we use a standard battery of questions developed by Perry (1996) and refined by numerous others (see for example Kim 2011). The 12 specific questions are listed in the Appendix. We then create a measure of PSM using principal components factor analysis. Consistent with previous work, the analysis reveals 4 significant factors representing attraction to policy making, commitment to public interest, compassion, and self-sacrifice. We use the score which retains these four factors as our PSM measure in subsequent analysis.

Results

Framing Effects

We first explore the response to framing effects among public and private managers by examining the results of the Asian Disease Problem experiment. Table 1 confirms that public and private managers were assigned into the positive and negative frames in statistically equivalent proportions. Though we do not show them here, the same was true for other subject characteristics (education, time in the workforce, etc.). Regardless, we present a multivariate analysis of responses to confirm results.

First, however, Table 2 presents the proportion of subjects that chose the risky, or probabilistic alternative, across the treatments and groups. The first row of numbers combines both public and

private managers and confirms the existence of framing effects for the combined pool of subjects. The results suggest that subjects were almost 3 times more likely to choose the risky alternative when outcomes were framed as a loss rather than a gain. As noted above, this is consistent with decades of research on loss aversion.

The next two rows split subject responses by sector. Looking between these rows in the second column, we see that there were no significant differences between the responses of public and private managers that were presented with the positive frame, where outcomes were described in terms of lives *saved* by the policy choice. When we look at responses among subjects that were given the negative frame, however, a significantly larger percentage of public managers chose the risky alternative when compared to private managers (77% vs. 64%, $p<.05$). This is consistent with our basic expectation that public managers will be more sensitive to framing effects than private sector managers.

As a corollary to that expectation, however, we proposed that the differential response to framing effects across the sectors should be mediated by the level of public service motivation due to the correlation between PSM and altruism, which has been shown to increase loss aversion for choices that affect others. We can explore the accuracy of this corollary from a couple of different vantages. First, we can note that in our sample public managers scored significantly higher on the PSM battery than did their private sector counter parts (.19 vs. -.2, $p<.05$). Next, we can note that, while there was no significant difference in the PSM score among those who chose the risky vs the certain program in the positive frame, the mean level of Public Service Motivation was significantly higher in the group that chose the policy with the probabilistic outcome when outcomes were framed as deaths. Taken together, these relationships

suggest that there is an association between PSM and response to framing effects and that public managers have higher levels of PSM than those from the private sector.

We can move beyond these associations, however, and use a mediating variables analysis to test our expectation. To do so, we focus exclusively on subjects that received the negative frame and the degree to which Public Service Motivation explains observed differences in the responses of public and private managers to that frame. If the inclusion of PSM in a model predicting risky choice with managerial sector reduces the observed impact of the latter then we can conclude that the impact of sector is, in part, a function of differences in PSM between public and private managers.

Table 3 provides results from the three models necessary for the mediating variables analysis. In the first model, the dependent variable is continuous (PSM) and the model is estimated as OLS. The second two models are estimated as logistic regressions, because the dependent variable in each is coded 1 if the subject chose the probabilistic outcome and 0 if they chose the program with the certain outcome. All models contain pretreatment covariates, including gender, education level, years in the work force, and years in current position, to improve the precision of the estimates.[1] The first column presents a model of the relationship between sector and the public service motivation score and the results confirm that being a public manager is significantly and positively associated with the level of PSM. The model in the second column predicts the choice of the probabilistic alternative with the sector of the manager and, as we would expect, given the comparison of proportions discussed above, being in the public sector is positively and significantly associated with that choice. Finally, the model in column 3 includes both the indicator of public manager and the measure of PSM. Comparing the

[1] All models report robust standard errors.

results from the Columns 2 and 3, the positive impact of being a public manager appears to shrink substantially after accounting for Public Service Motivation, suggesting that the latter mediates the impact of the former.

Unfortunately, determining the actual substantive importance of the mediating effect is considerably more difficult in this case because the dependent variables are dichotomous and models are estimated using logistic regression. Mediating variables analyses with continuous dependent variables depend on the fact that the residual variance changes as variables are added or subtracted from the models, which facilitates comparison of coefficients across models. However, in maximum likelihood models, the residual variance is fixed resulting in the rescaling of coefficients when variables are added or removed. Thus, the direct and indirect effects of the independent and mediating variables cannot be calculated using the coefficients from 2 different models.

Fortunately, scholars have developed methods for analyzing mediating effects with binary variables. We use Kenny's (2013) approach and the Stata routine written by the author, which uses beta coefficients from OLS models and rescales ML estimates using the standard deviation of the underlying latent variable, to calculate direct and indirect effects.[2] Doing so reveals that roughly 25% of the difference between public and private managers in the likelihood of choosing the risky alternative when outcomes are framed negatively is actually due to higher levels of Public Service Motivation in the former. This result offers strong support for our assertion that differences in response to framing effects among public and private managers are, in part, a function of different levels of PSM across the two groups. We will discuss potential interpretations and implications of the result further in the concluding section.

[2] The Stata command, once installed, is binary_mediation

Status Quo Bias

We now proceed to our discussion of the status quo bias experiments. Table 4 shows the distribution of respondents across the four frames (control, SQ1, SQ2, and SQ3) for both the tender and software experiments. While Table 1 indicated that the randomization worked well, it is worth noting there were relatively fewer groups in which a respondent could be randomized in the framing experiment versus either of the status quo bias experiments. Here, we see similar numbers of respondents across the frames for both experiments. But, when we look inside each of those frames we see some differences between sectors of respondents in each frame. This occurred because we randomized our assignments at the level of the survey rather than by sector of employment. Because we are looking at the frequency with which subjects chose various responses in the experiments, we are not concerned that the unequal distribution will results. Nonetheless, we again show a multivariate analysis following the more straightforward comparisons of proportions in order to confirm the robustness of the results.

Tables 5 and 6 present the findings from the status quo bias experiments. Table 5 presents the results of private-sector managers and Table 6 shows the results of the public-sector managers. In each Table, we show the two scenarios (e.g., software or contracting) as well as the options presented to the respondents. The rows represent the treatments conditions from the software purchase and then the contracting experiments. In the columns, we present the frequency of subjects that chose the status quo option, the frequency of choice of this option in the neutral version of the vignette, and the option's frequency when it is an alternative to the status quo.

As an example of how to read the table, the first row in Table 5 shows that among private sector managers, 68% who received the package A status quo prompt in the software experiment chose that option. Alternatively, 78% who received the neutral treatment chose package A, and only 62% chose it of those respondents who were presented with the status quo B or C frames. Similarly, the first row in Table 5 shows that 50% of public managers chose the status quo when given the prompt about software package A in the software experiment. 58% chose that option when given the neutral frame. Finally, the table indicates that 61% of public managers in the other treatment groups chose that option. The final 2 columns present the significance levels for Chi-Squared tests of the differences for the ***status quo vs. the neutral treatment*** and then the ***status quo vs. alternative status quo*** frequency. For each group, the table presents 12 significance tests, examining SQ vs. Neutral and SQ vs. ASQ for two experiments with three potential choices each. Significant Chi-squared tests are bold. Those that are in the non-hypothesized direction, that is away from the status quo are labeled "n.SQ".

Looking first at private sector managers (Table 5), we find that members of that group are significantly biased toward the status quo in 8 of the 12 cases. Interestingly, this is almost identical to the prevalence of status quo bias that Burmeister and Schnade found when examining the phenomenon in bankers with a similar set of experiments. Turning to the results for public managers (Table 6), we see that they appear to be *less* likely to have their choices anchored to the status quo. For that group, only 3 of the 12 choices were significantly biased toward the status quo prompt.

While the comparison discussed above suggests that public managers are less prone to the status quo bias than their private sector counterparts, we can conduct a more direct test of that hypothesis. We restrict the analysis to subjects who were presented with a status quo prompt in

at least one of the experiments and model the likelihood of making the choice consistent with that prompt, rather than one of the alternatives. The model, which is presented in Table 7, is estimated as a logistic regression, includes pretreatment covariates, and reports robust standard errors. The model confirms that public managers were less likely to make the choice consistent with the status quo prompt than were their private sector counterparts. Substantively, the impact is relatively modest, however, suggesting that being from the public sector reduced the probability of making the status quo choice by .1.

Conclusion

We began with observation that modern management reforms borrow heavily from the private sector to incentivize public managers to be more entrepreneurial and more accepting of innovation and risk. We know relatively little, however, about the ways in which public managers make decisions under conditions of risk. While the common "wisdom" is that these actors are more risk averse and anchored to the status quo than those in the private sector, the scholarly evidence is quite mixed. The efficacy of, and even the need for, reforms that incentivize greater risk tolerance among public sector employees depends on an accurate understanding of risky choice in that sector.

To address this gap, this study fields a series of previously validated experiments designed to assess framing effects and status quo bias in a panel made up of public and private sector managers. Specifically, it uses the classic Asian Disease Problem to asses if subjects are more risk seeking when outcomes are framed as losses rather than gains and two adaptations of experiments developed by Samuelson and Zeckhauser, which asses the degree to which choices are anchored to the status quo condition. Because of the demonstrated relationship between

altruism and framing effects, as well as the correlation between altruism and Public Service Motivation (PSM), we hypothesized that public managers would exhibit greater sensitivity to framing effects due to their higher levels of PSM. There is little reason to believe that the factors shown to influence status quo bias would vary across the sectors; so, we hypothesize that there should be little difference in the prevalence of status quo bias between public and private sector managers.

Results of our analyses provide considerable support for expectations regarding framing effects. Managers from both sectors are more risk seeking when outcomes are framed as losses rather than gains, as decades of research would lead us to expect, but public managers were significantly more risk seeking than their private sector counterparts when considering policies that may result in the *deaths* of other citizens. As expected, however, the level of public service motivation, which is significantly higher among public managers, significantly mediates the relationship between managerial sector and responsiveness to framing effects. Indeed, we find that roughly a quarter of the observed difference between public and private managers is due to differences in levels of PSM among those actors.

Findings from our status quo bias experiments do not support the popular perception that government employees are hopelessly anchored to the status quo relative to those in business. We uncover roughly the same degree of status quo bias as previous studies in the choices made by professionals in the private sector. However, we find that public managers were significantly *less* likely to exhibit the bias when compared to private managers.

The result shave significant implications for study of risky choice among public versus private managers. Though scholars have been exploring potential differences for decades, ours is one of only a few studies to directly compare subjects from both sectors in an experimental

setting. Interestingly, though descriptive theories of risky choice, such as prospect theory, are widely assumed to accurately describe decision making across a wide variety of actors, our findings suggest that there are important differences in the degree of loss aversion between actors that choose to work in the public versus the private sector. Those differences do not, however, match the common wisdom about the ways in which these actors will behave. Public managers exhibit greater loss aversion when making decisions about the wellbeing of others, which leads them to be more *risk seeking* than their private sector counterparts. Alternatively, they show lower levels of loss aversion, at least in terms of moving away from the status quo condition, when making organizationally or process focused decisions (software upgrades or letting contracts).

These results have significant implications for reform efforts meant to incentivize risk taking in public organizations. On the one hand, they suggest innovations might be framed in terms of losses rather than gains, if political principals wanted to increase the risk public managers would tolerate the risk inherent in adopting new programs or technologies. In a broader sense, however, they suggest that the perceived need to incentivize risk taking in the public sector may grow out of the inaccurate assumption that public managers and employees are inherently more risk averse than their private sector counterparts. Though more studies are obviously necessary, the results from our experiments do not support that assumption.

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Appendix

Public Service Motivations Questions

PSM1: I am interested in making public programs that are beneficial for my country or the community I belong to.

PSM2: Sharing my views on public policies with others is attractive to me.

PSM3: Seeing people get benefits from the public program I have been deeply involved in brings me a great deal of satisfaction.

PSM4: I consider public service my civic duty.

PSM5: Meaningful public service is very important to me.

PSM6: I would prefer seeing public officials do what is best for the whole community even if it harmed my interests.

PSM7: It is difficult for me to contain my feelings when I see people in distress.

PSM8: I am often reminded by daily events how dependent we are on one another.

PSM9: I feel sympathetic to the plight of the underprivileged.

PSM10: Making a difference in society means more to me than personal achievements.

PSM11: I am prepared to make enormous sacrifices for the good of society.

PSM12: I believe in putting duty before self

Table 1: Distribution of Respondents for Asian Disease Problem Experiments
(PRV - private, PUB - public)

Scenario	Negative	Positive
Asian Disease	74 PRV	76 PRV
	77 PUB	74 PUB
	Total = 151	*Total = 150*

Table 2: Proportion Choosing Risky Choice for Asian Disease Problem Experiments
(PRV - private, PUB - public)

Scenario	Negative	Positive
Combined	0.70	0.26
PRV	0.64	0.28
PUB	0.77	0.24

Table 3 Analysis of PSM as Mediating Variable

	Model 1	Model 2	Model 3
Variables	**coef. (s.e.)**	**coef. (s.e.)**	**coef. (s.e.)**
Public Sector	0.524***	0.734*	0.564
	(0.139)	(0.385)	(0.409)
Public Service Motivation			0.344
			(0.212)
Female	0.152	-0.286	-0.344
	(0.137)	(0.390)	(0.397)
Education	-0.004	-0.0314	-0.0296
	(0.032)	(0.0972)	(0.0982)
Years in Workforce	0.008	-0.0158	-0.0191
	(0.006)	(0.0177)	(0.0176)
Years in Current Job	0.002*	-0.00252	-0.00334
	(0.001)	(0.00532)	(0.00556)
Intercept	-0.565**	1.293*	1.511**
	(0.279)	(0.716)	(0.738)
N=	150	150	150

Standard errors in parentheses *p<.1, **p<.05, ***p<.01

Table 4: Distribution of respondents across treatments and scenarios (PRV - private, PUB - public)

Scenario	Software	Contracting
Neutral	41 PRV 33 PUB *Total = 74*	38 PRV 39 PUB *Total = 77*
SQ1	41 PRV 38 PUB *Total = 79*	32 PRV 43 PUB *Total = 75*
SQ2	30 PRV 43 PUB *Total = 73*	35 PRV 37 PUB *Total = 72*
SQ3	38 PRV 37 PUB *Total = 75*	45 PRV 32 PUB *Total = 77*

Table 5 Frequency and Significance of Status Quo Choice for Private Sector Managers

Scenario	Options	SQ	Neutral	ASQ	p-level$_{SQ-ASQ}$	p-level$_{SQ-NEUT}$
Software	A	28/41=0.68	32/41=0.78	42/68=0.62	0.20	**0.10 (n. SQ)**
	B	10/30=0.33	8/41=0.20	21/79=0.27	0.24	**0.07**
	C	6/38=0.16	1/41=0.02	2/71=0.03	**0.02**	**0.02**
Contracting	15%	29/32=0.91	29/38=0.76	55/80=0.69	**<0.01**	**<0.01**
	20%	10/35=0.29	9/38=0.24	10/77=0.13	**0.03**	0.28
	25%	4/45=0.09	0/38=0.00	2/67=0.03	**0.09**	**0.03**

Relative frequencies and asymptotic significance levels of the Chi-squared statistics for private-sector managers (Significant p-levels ($p \leq .10$) are indicated by using bold fonts; directions in accordance with a status quo bias [i.e., one-tailed test]; significant differences in a direction contrary to a SQB are marked with "n. SQ" in parentheses.)

Table 6 Frequency and Significance of Status Quo Choice for Public Sector Managers

Scenario	Options	SQ	Neutral	ASQ	$p\text{-level}_{SQ\text{-}ASQ}$	$p\text{-level}_{SQ\text{-}NEUT}$
Software	A	19/38=0.50	19/33=0.58	49/80=0.61	**0.10 (n. SQ)**	0.84
	B	12/43=0.28	12/33=0.36	34/75=0.45	**<0.01 (n. SQ)**	0.88
	C	2/37=0.05	2/33=0.06	2/81=0.02	0.19	0.57
Contracting	15%	29/43=0.67	36/39=0.92	38/69=0.55	**0.05**	**<0.01 (n. SQ)**
	20%	13/37=0.35	2/39=0.05	19/75=0.25	0.11	**<0.01**
	25%	5/32=0.16	1/39=0.03	8/80=0.10	0.20	**0.04**

Relative frequencies and asymptotic significance levels of the Chi-squared statistics for public-sector managers (Significant p-levels ($p \leq .10$) are indicated by using bold fonts; directions in accordance with a status quo bias [i.e., one-tailed test]; significant differences in a direction contrary to a SQB are marked with "n. SQ" in parentheses.)

Table 7 Logistic Regression of Status Quo Choice

Variables	**Coef (s.e.)**
Public Manager	-0.614**
	(0.310)
Female	-0.353
	(0.301)
Education	0.104
	(0.0740)
Years in Workforce	-0.0153
	(0.0134)
Years in Current Job	0.00660
	(0.00577)
Intercept	-1.070*
	(0.600)
N=	284

Standard errors in parentheses * p<.1, **p<.05, ***p<.01