NEGOTIATION IN PUBLIC-PRIVATE PARTNERSHIPS

A laboratory experiment on context, domain, and PSM

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ABSTRACT

Strategic negotiation is a central but mostly unexplored activity in public-private partnerships (PPPs). Based on prior research on sector-specific behavior and game theory, we theorize that public and private sector agents follow dissimilar bargaining strategies when negotiating about excess gains and losses in a PPP scenario. Specifically, we investigate the role of sectoral context, bargaining domain, implicit associations, and PSM on subjective negotiation efficiency. Tested with a strictly controlled laboratory negotiation experiment (dyadic alternating-offers bargaining game with dynamic dominance; N=118 participants; $Obs.$=8,368 offers and counteroffers leading to n=1,121 contracts), we provide tentative behavioral evidence on a linear relationship between public agency and satisficing (vis-à-vis maximizing) negotiation behavior in a PPP scenario. PSM moderates the effect of domain on sectoral agency asymmetrically across negotiation magnitudes. These findings advance our understanding about the micro-foundations of strategic choice in PPPs and underline the complex psychologically effects of individual motivations and *publicness* on negotiation behavior.

Keywords: *Negotiation, Strategic Bargaining Behavior, Public-private Partnership (PPP), Public Service Motivation (PSM), Laboratory Experiment.*

JEL: *H83, C78, D81, D91*

INTRODUCTION

Public-private partnerships (PPPs) play a major role in the provision of public goods and services worldwide. In theory, PPPs are formalized long-term oriented cross-sectoral arrangements in which both public and private sector agents collaborate for mutual benefit, bundling and sharing risks to realize large-scale projects in a synergetic manner (Hodge and Greve 2007; Reynaers and De Graaf 2014; Villani, Greco, and Phillips 2017). In practice, partners often fail to sustain mutually beneficial partnerships and instead tend to recur to self-serving strategies that, ultimately, lead to partnership failure (Kee and Forrer 2012). Following recent streams of behavioural research on strategic risk behaviour in cross-sectoral contexts (Zou and Kumaraswamy 2009; Weißmüller and Vogel 2018; Bouwman *et al.* 2019) and on (negativity) biases toward the public sector (Marvel 2015; Weißmüller 2016), this study argues that – based on partners' heterogeneity in logics and the dissimilar attributes associated with the sectors – PPPs create dysfunctional negotiation spaces that incorporate incentive problems on the micro-level that ultimately impede coordination efficiency (Malatesta 2011).

PPPs mark the clash of two worlds: On the one hand, public partners socialized in the *satisficing* logic of the public sector strive to balance conflicting demands between economic returns and long-term interests of the general public. On the other hand, private partners are trained to apply the *maximizing* logics of their private sector firm, striving to maximize their subjective utility in the form of (monetary) profits. These essentially incongruent logics implicitly or explicitly incentivize private partners to self-servingly exploit opportunities that emerge in PPPs over time, disregarding the direct or indirect effects of their strategic behavior on the long-term objective of the PPP and the general public (Simon 1945; Van Ham and Koppenjan 2001; Saz-Carranza and Longo 2012). Following this logic of conflicting micro-level interests, we explore how partners' sector affiliation (i.e. their sectoral agency) and their implicit affective and

explicit motivational attitudes influence their strategic negotiation behavior in allocating partnership-related gains and losses.

Negotiation on and allocation of risks is a central strategic activity in PPPs for both public and private partners and it is a fundamental obstacle for PPP success (Ghere 2001; Kee and Forrer 2012). Although PPPs are generally designed to allow for the implementation of mutually beneficial and reciprocal strategies by contract, navigating the fallacies of bargaining about emerging risks (i.e. those that occur during partnership tenure) is a complex and largely unexplored issue – especially given partners' typical interdependence in PPPs and the challenge of negotiating across sectoral boundaries (Klijn and Teisman 2003; Medda 2007; Degenhart and Wessel 2015; Bouwman 2018). By exploring the micro-level mechanisms of cross-sectoral negotiation behavior in a PPP scenario under risk, this study answers explicit calls for micro-level research into strategic choice in PPPs by Wright (2015), Bouwman (2018), Wang *et al.* (2018), and Bouwman *et al.* (2019). We conduct a rigorously controlled randomized laboratory experiment in both the domains of gains and losses to advance and challenge prior research on the reliability of the predictions of prospect theory across sectors by Bækgaard (2017) and Bouwman *et al.* (2019), and our results build bridges between the long-standing discourse on maximizing and satisficing rationalities and normative choice theory in the public sector (Simon 1945; Gigerenzer 2005).

Following recent calls for methodological pluralism in public administration (PA) research (Jilke, Van de Walle, and Kim 2016), we test our hypotheses by conducting a dynamic multi-stage negotiation game with alternating dominance (z-Tree laboratory experiment) and systematically manipulate the context of choice with sector-specific vignette framing treatments. Laboratory games are especially valuable for researching context-dependency in negotiation behavior because their strictly controlled design allows for the identification of

psychological and contextually-induced causal mechanisms that influence individuals' strategic maneuver in PPPs beyond their individual idiosyncrasies.

Based on 8,368 observations of offers and counteroffers resulting in n=1,121 contracts nested within a balanced original sample of N=118 participants, results show that both public and private sector agents fail to share risks and benefits efficiently, that public agents are less likely to follow utility maximizing strategies, that the domain of loss accelerates self-serving negotiation behavior, and that PSM substantially affects negotiation efficiency in archetypical PPPs.

THEORY

Negotiation across sectoral boundaries

Negotiation is typically defined as a decision-making process among two or more interdependent agents with non-identical preferences but potentially synergetic goals (Naele and Bazerman 1992; Bouwman 2018). Because some partners' interests are shared and some are opposed, strategic negotiation manifests in the form of an interactive back-and-forth communication process aimed at reaching agreement about what each party will give and take (Ury 1993). Ideally, PPPs are designed as a choice environment that allows for truly synergetic outcomes, a situation equivalent to a non-zero-sum i.e. variable-sum game (Crawford 1997; Peters 2015). For example, individual partners in PPPs might wish to maximize their share of profits while hoping to minimize their share of losses. If one partner's gains block the other partner's goals, the situation is equivalent to a zero- or constant-sum game (Zou and Kumaraswamy 2009).

The normative game theoretical prediction for rational agents who are well-informed about the synergetic benefits of the partnership they are engaged in is that they will strive to maximize

their individual utility in two ways: firstly, by strictly following the partnership agreement as long as they expect it to result in the expected subjective utility agreed upon in the future and, secondly, in case of unforeseen risks, they will offer no excess contribution to these risks but accept only amounts equal or lower[1] than what they perceive as a *fair* proportional split among all partners (Rabin 1993). Logically, in a two-player game such as an archetypical PPP with only two agents, this fair share is equivalent to the fifty-fifty split of excess risks and utility among partners. A rich body of empirical economic research shows that most people consider the equal split as the fairest – or: *most acceptable* – outcome of bargaining, making the fifty-fifty split the general stable benchmark in evolutionary bargaining theory (Kahneman, Knetsch, and Thaler 1986; Ochs and Roth 1989; Güth 1995).

It follows that bargaining between rational well-informed agents acting on behalf of their respective organizations in a collaborative and (potentially) synergetic PPP should also result in the proportional split of emergent risks and returns generated from the partnership, by means of bundling them in a fair, efficient, and cost effective manner among the individual partners for mutual benefit (Bing *et al.* 2005; Wang *et al.* 2018). Yet, both scholars and practitioners point out that risk sharing in PPPs is especially challenging (Kee and Forrer 2012), because partnering across sectoral boundaries means that agents who are guided by essentially dissimilar institutional logics need to balance their – potentially competing – subjective strategic goals with those specified as common goals for the partnership in order to realize synergy (Fottler 1981; Pesch 2008). Prior research on heterogeneity in group decision-making by Gillet, Schram, and Sonnemans (2009) indicates that PPPs might incorporate bilateral coordination problems by default: Because PPP partners originate from dissimilar sectors and are potentially populated by agents holding dissimilar individual motivations and values (Nabatchi 2018), they might in fact be unable to interpret their shared negotiation space and its incentives in a congruent way

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[1] Likewise, utility maximizing agents would accept amounts equal or *above* the fair split in the case of excess *gains*.

that would allow for efficient bargaining – in the sense of reaching a pareto-optimal solution that still satisfies both partners' individual objectives – because their ultimate goals and the strategies perceived as acceptable means to realize these goals are fundamental opposites and essentially incongruent (Fottler 1981; Pesch 2008): Archetypically, the public partner will carry a societal responsibility as a consequence to their actions while private partners are not burdened by this obligation to the general public and hence possess relatively higher degrees of discretion to individually and immediately pursue subjective utility maximizing strategies (Simon 1945). This is problematic because opportunistic behavior between partners is directly related to long-term partnership failure.

These differences can result in potentially conflicting incentives to follow individual utility maximizing strategies and break partnership agreements (Bouwman 2018). In their qualitative study based on interviews with managers of public-private joint ventures, Saz-Carranza and Longo (2012) found that competing logics were especially critical obstacles to successfully implementing strategic collaboration in PPPs. If partners from the public and the private sector – explicitly or implicitly – follow dissimilar individual-level goals that are incongruent with the shared meso-level objective of sharing the PPP's endogenous risks and find sufficient incentive for opportunisms and sufficient discretion, normative choice theory suggests that rational partners will independently strive to minimize their individual share of these risks by micro-level bargaining in a way that allocates any excess risks (i.e. risks that arise unexpectedly during partnership tenure) to their partner(s) rather than themselves by using any means of discretion. It follows that

>   *Hypotheses 1 (H1): public (private) sector agents are less (more) likely to follow*
>
>   *utility maximizing negotiation strategies in PPPs*

in the sense that public (private) sector agents negotiate comparatively smaller (higher) amounts of excess profits for themselves and accept to carry relatively higher (smaller) amounts of excess losses, *ceteris paribus*.

Domain-specificity of negotiation behavior

Prior research on cognitive and behavioral biases in risk behavior strongly indicate that people use dissimilar negotiation strategies when negotiating in the domain of gains compared wth the domain of losses (see Naele and Bazerman (1992) for an extensive review). While prior research points out that domain can influence bargaining behavior in the public sector (Bouwman 2018), the direction of this effect in a PPP – i.e. in a cross-sectoral setting with goal interdependence and partial goal incongruence – is unclear and needs further exploration because not all behavioral biases translate linearly into a public-private setting.

Most prominently, prospect theory suggests that in the prospect of gains, i.e. when negotiating about shares of profits, individuals act relatively more risk averse than in a situation of negotiating about sharing losses of the same amount (Kahneman and Tversky 1979; Thaler 1981). However, recent experimental findings by Bækgaard (2017), Weißmüller (2016), Weißmüller and Vogel (2018) reveal that individuals are likely to violate this heuristic principle and instead prefer to take risks in the domain of gains if they are framed as public sector agents. Further experimental evidence by Bracha and Brown (2012) shows that people spending public funds will act relatively more risk affine and Khadjavi and Lange's (2015) study employing linear public goods games reveals that individuals contribute less to the public good when taking from an existing public account and contribute smaller amounts if they have the action space of both giving and taking. It follows that

> *Hypothesis 2 (H2): domain moderates the relationship between public agency and*
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> *utility maximizing negotiation strategies, such that the relationship is stronger*
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> *(weaker) in the domain of loss (gains).*

Affective implicit biases

In dyadic settings – that is the simplest form of an archetypical PPP consisting of only one public and one private partner – two factors drive micro-level negotiation behavior: the specific situational *context* framing the bargaining setting (i.e. the PPP as well as the formal rules established to govern it) and the individual goals, perceptions, emotions, and, eventually, *actions* of the individual negotiators (Barry and Oliver 1996). Consequently, the affective states experienced by both agents on all stages of the negotiation process are as essential in priming, framing, mediating, and moderating negotiation behavior (and outcomes) as the interpretation and evaluation of the contextualizing choice environment, the incentives it offers, and the mechanisms by which it allows prior bargaining results to feedback into the proximate stages of bargaining (Barry and Oliver 1996).

A large body of empirical research shows that in many countries individuals are systematically biased toward the public sector in the sense of unconditionally assuming that public organizations were less effective (Baarspul and Wilderom 2011; Chen and Bozeman 2012; Marvel 2015), that public agents acted irrationally risk averse (Bellante and Link 1981; Bozeman and Kingsley 1998; Boyne 2002; Olsen 2015), and that public sector performance was *per se* inferior (Bækgaard and Serritzlew 2016; Hvidman and Andersen 2016). Consequently, implicit and explicit anti-public sector bias, negative stereotyping, and a feeling of alienation – i.e. the perception of *otherness* (Gurevitch 1988) – toward the public sector can have powerful effects on decision makers' negotiation strategies. A substantial body of scholarship shows that such attitudes and associations play a functional role in negotiation behavior, indicating that positive affect increases the likelihood of cooperation and equal risk sharing while negative affect increases the likelihood of engaging in opportunistic behavior (Barry and Oliver 1996; Bazerman *et al.* 2000; Tsay and Bazerman 2009). Consequently, we assume that strong implicit affect toward the sectors increases the perceived heterogeneity

between sectors which can have detrimental consequences for partners' collaboration efficacy and, hence, influence bargaining strategies and negotiation outcomes. Prior research by Gulati (1995) and Calanni *et al.* (2014) shows that in strategic partnerships trust is an essential factor for maintaining and governing partnerships under conditions of risk and that it is much harder to maintain trust and effective cooperation if partners are perceived as unfamiliar or belonging to other (social) groups such as sectors (van Asselt and Renn 2011; Degli Antoni and Grimalda 2016). It follows that

> *Hypotheses 3 (H3): strong sectoral affective associations influence the relationship between sectoral agency and negotiation strategies*

such that public (private) agents with positive public (private) sector associations are more likely to follow subjective utility maximizing bargaining strategies.

Public service motivation

Normative theories of choice assume that people are mainly motivated by self-interest (von Neumann and Morgenstern 1944; Luce and Raiffa 1957), yet 50 years of research in the fields of behavioral economics and social psychology revealed that individuals' choice behavior under risk frequently and systematically deviates from the theoretically predicted self-serving (i.e. subjective utility maximizing) paradigm: People prefer to contribute to the greater good, share more than they are obliged to and are generally driven by motivations and values that consider the consequences of their behavior for their social environment (Kuhlman and Marshello 1975; Van Lange and Kuhlmann 1994; Bozeman 2007). This systematic deviance is prominently explained by the idea that people are motivated by an abstract value-driven motivation related to serve others and the public interest based on social value orientation, reciprocity, and a preference for fairness and sharing (Bogaert, Boone, and Declerck 2008; Balliet, Parks, and Joireman 2009; Nabatchi 2018).

The most prominent concept exploring this motivation to serve others in PA research is public service motivation (PSM). PSM is "an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions" (Perry 1996: 6) and its relation to commitment to the public interest, compassion, self-sacrifice, attraction to public sector employment (Coursey and Pandey 2007; Vandenabeele 2008; Esteve *et al.* 2016), altruism, and pro-social behavior (Houston 2006; Esteve, van Witteloostuijn, and Boyne 2015; Esteve *et al.* 2016; van Witteloostuijn, Esteve, and Boyne 2017) has been explored vastly.

A number of recent behavioral and conceptual studies give rise to the assumption that individuals' sector-specific negotiation behavior in PPPs could be moderated by individuals' sector-specific attitudes – i.e. affective attraction and associations – and social value orientation (Kanagaretnam *et al.* 2009) – especially their level of PSM (Esteve, van Witteloostuijn, and Boyne 2015; van Witteloostuijn, Esteve, and Boyne 2017; Schott and Ritz 2017; De Waele, Weißmüller, and van Witteloostuijn 2018). Conducting two laboratory experiments, Kanagaretnam *et al.* (2009) tested individuals' likelihood to contribute to a common goods investment game. They show that highly pro-social individuals are substantially more likely to reciprocate other agents' investments in the game and are less likely to take advantage of trusting agents. Esteve, van Witteloostuijn, and Boyne (2015) use three experimental games based on the classic prisoner's dilemma to scrutinize the effects of PSM on inter-organizational collaboration behavior. Their study – although not being conducted in a cross-sectoral context – indicates that PSM influences strategic decision making in two ways: first, players with high PSM are generally more willing to collaborate if they have first mover's advantage. Second, the authors show that even if players are in the role of the second mover and already know that their partner has defected, individuals with high levels of PSM will still not opt for the strategic option that would maximize their subjective utility as suggested by rational choice theory. Instead, people reporting high levels of PSM are more likely to uphold their collaborative effort even though they know that their choice will only benefit the other partner and not themselves.

Other lab-based experimental research by Tepe (2016) shows that high levels of self-reported PSM are directly related to higher contributions to trust-based games with monetary rewards.

It follows that

> *Hypothesis 4 (H4): the relationship between PSM and subjective negotiation efficiency is negative*

such that high-PSM individuals are less likely to follow subjective utility maximizing negotiation strategies in a PPP context, consequently reaching relatively more disadvantageous bargain agreements compared with low-PSM individuals. In summary, Figure 1 presents our conceptual model.

[Please place Figure 1 about here]

MATERIALS AND METHODS

Experimental procedure and sampling

We test out hypotheses by conducting a behavioral laboratory experiment based on a classic strategic bargaining game with alternating-offers and dynamic dominance complemented with a role-framing scenario vignette (public vs. private negotiator in a well-functioning equal split archetypical PPP) and a sociodemographic survey.[2] Dynamic multi-stage games are generally used to research the economic behavior of individuals that strive to realize individual utility by

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[2] In the spirit of open science, this study was preregistered (Open Science Framework: https://osf.io/udrzj/) and appendix A.3 provides the full experimental z-Tree code to facilitate future replication studies.

exploiting opportunities by strategic maneuver within a specific context (i.e. the PPP) under fixed premises of outcome interdependence, imperfect information, and chance (Ghere 2001).

The data were raised using the z-Tree (version 3.6.7) software in a professional laboratory for economic experimentation at a large German university in May 2018 with an original sample of N=118 participants (Fischbacher 2007; Bock, Baetge, and Nicklisch 2014).

In the prospect of small to moderate treatment effects (Cohen's d<|0.50|, *power*=0.8, α=0.05) necessary sample sizes for detecting significant correlations in two-tailed (non-directional) tests between two treatment groups amount to n=64 participants per treatment group, which has been achieved (Ellis 2010). Participants volunteered after being invited via e-mail among a standing panel of N=2,429 (former) graduate students of PA and PM, business administration, and related social sciences. Participants were incentivized with a minimum show-up fee of €5 and the prospect of winning a considerably larger amount[3] of prize-money based on their actual negotiation efficiency during the game. The sample was on average M=25.9 (SD=4.8) years old and comprises 54.2% female respondents. The raw data were strictly pre-stratified for missing and obviously repetitive responses, resulting in a total sample of 8,368 observations of offers and counteroffers nested in N=118 participants and n=1,121 bargaining agreements (*contracts*).

Game design, priming treatment, and dependent variable

We developed an original between-subject bargaining experiment (see appendix A for full setup and treatment vignettes) comprising elements of the classic ultimatum game and dynamic

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[3] The incentive payouts were designed to correspond with realistic conditions for civil servants in a career-based PA employment system like Germany: In the public sector treatment, final payouts were fixed at a medium hourly wage rate while, in the private sector treatment, actual payouts depended on the negotiation efficiency of players ranked relatively to all other private agents' efficiency over the whole length of the experiment. This corresponds to the real conditions of employment in the German public and private sector where public service employment does not allow for performance-based (additional) payment. In this way, the incentive payout structure adds more realism to the scenario because it is directly relatable and familiar to the sample thus increasing the likelihood of stimulating characteristic sector-specific negotiation behavior under risk (Battalio, Samuelson, and Van Huyck 2001).

dominance through alternating-offers bargaining in multiple negotiation rounds.[4] In the lab, the experimental procedure comprised five steps: introduction, scenario contextualization, vignette-based role framing treatment (public or private agency), negotiation game, and, lastly, survey and debriefing.

First, participants were randomly and anonymously seated in their individual cabins where they received all relevant information regarding the aim, scenario, and structure of the experiment (both in written form and also read out aloud to the whole group) for clarification in order to ensure that all participants were well-informed a priori about the game and its payout mechanisms.

Second, the experiment was contextualized in the scenario of a large-scale urban infrastructure project with shared operational risks between one public and one private sector partner. Following Hodge's (2004) PPP risk taxonomy, the scenario stressed that the agreement between partners was to share both profits and losses equally to set an explicit default for negotiation strategies and to increase the validity of findings through higher perceived realism (Duersch and Müller 2016).

Third, participants were randomly framed into either the role of a senior civil servant or a senior private sector employee with equal negotiation discretion and space (*treatment*). They were instructed to act on behalf and in the best interest of their organization (public or private agency,

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[4] In alternating-offers bargaining games with dynamic dominance, two players (1 and 2) propose offers about how to share a given monetary amount c_t ("cake"). Both players can take the initiative and propose as many offers as they like within a certain timeframe. In multiperiod-ultimatum bargaining setups like the one used in the current study, the game relies on a given number T of possible negotiation rounds and on a given cake size c_t for every possible round $t = 1, \ldots , T$. Players determine their individual demand x_t with $0 \leq x_t \leq c_t$ which the responder can either accept or reject. Acceptance yields a binding agreement implying that the proposer receives x_t and the responder $y_t(x_t) = c_t - x_t - r_t$ (with r_t being the residual of the cake with $0 \leq r_t \leq c_t - x_t$ if the game allows for incomplete cake sharing) and resulting in the end of this round. In classic ultimatum games, dominance, i.e. the right to making offers, is fixed or strictly iterated which means that only one player at a given time can propose offers. In bargaining games, both players can simultaneously propose offers and respond to offers (by accepting or counteroffering) as to exercise dominance (Güth 1995; Crawford 1997, 15).

respectively) in the following stages of the experiment to elicit realistic contextual negotiation behavior and test *H1*. To control for scenario immersion and framing treatment success, respondents were asked to specify three immediate associations with their sector to increase cognitive elaboration (Barone and Smith Hutchings 1993; Crawford 1997; Aguines and Bradley 2014). These free associations were later interpreted in an iterative mixed-methods approach with Võ *et al.*'s (2009) validated affective word list inventory[5] to estimate the metric associative valence scores of these associations, which reveal respondents' implicit positive or negative *affect towards the sectors* as an attitudinal control variable to test *H3* in multivariate analysis.

After contextualizing and role framing, fourth, the domain-based negotiation phase commenced (*H2*). We used an alternating-offers bargaining game with dynamic dominance (Crawford 1997) that consisted of two sequential phases of 15 rounds each. In the first phase, the PPP project was portrait with superior performance generating unexpected excess profits (*domain of gain*) about which randomized dyads of participants primed with different sector-specific role treatments had to negotiate dynamically about. Player dyads were rematched after each round to inhibit path dependencies and learning-based carry-over effects (Marks and Gerrits 2017). Since risk behavior is a function of scale (Thaler 1981), the magnitude of these excess profits varied systematically across the 15 rounds (range: 20,000€ - 300,000€ in linear steps of 20,000€) to inhibit order effects (Güth 1995). In each round (t), both players had 45 seconds[6] to simultaneously propose offer and counteroffer divisions of said negotiation amount (c_t) between the two players until one of them accepted. To increase scenario realism, the gain-domain leg

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[5] Võ *et al.*'s (2009) BAWL-r inventory is an extensive list of several thousand common German words which were systematically and empirically tested for their emotional valence, emotional arousal, and imageability on a metric scale in order to be used as psycholinguistic indexes and treatment stimuli in psychological and behavioral experiments. Reversely, the BAWL-r inventory can also be used to associate open semantic responses with BAWL-r's values by qualitative coding and quantifying these semantic responses across subjects to create mean implicit affective scores.

[6] The experimental design, treatment, and magnitudes of negotiation amounts were pretested extensively with focus group lab sessions to maximize stimulus realism and minimize response bias. Pretesting revealed that increasing the bargaining phase length (>45 seconds per round) did not increase the likelihood of reaching agreement but substantially increased response fatigue.

of this game is a non-zero-sum game: The gains of player 1 (x_t) are the losses of player 2 ($y_t(x_t)=c_t - x_t - r_t$) with a flexible residual (r_t) solely determined by players' bargaining behavior. If the players were unable to negotiate an agreement within 45 seconds, the profit expired and no player received any share of excess profits in this round. The second phase of the game (*domain of loss*) was introduced by a short descriptive interlude, which portraits the PPP project as underperforming so that the newly randomized mixed dyads now negotiated about splitting the full amount of unexpected losses for 15 rounds (zero-sum game; $y_t(x_t)=c_t - x_t$).[7] Failure to reach an agreement within 45 seconds resulted in the default 50-50 split among the two partners.[8]

Our main dependent variable is the *AMOUNT* of gains and losses negotiated by each individual across all rounds. While AMOUNT serves as an indicator for negotiation efficiency, individuals' frequency and amount of *offers* and *counteroffers* is used to further characterize overall negotiation behavior.

Independent and control variables

Negotiation behavior is a function of context, attitudes, and individual preferences toward risk and uncertainty (Dohmen *et al.* 2011), as well as a number of individual psychological and socio-economic factors (Bazerman *et al.* 2000; Freundt and Lange 2017; Tepe and Prokop 2018). Consequently, we complemented the negotiation game with a questionnaire on socio-demographic characteristics and individual attitudes to control potentially confounding covariates.[9] Participants' *risk preference* was measured with Madden, Petry, and Johnson (2009)

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[7] The numeric amounts of losses were varied and randomized exactly like the amounts of gains to achieve task balance, see appendix A.1 for more detail.

[8] In cameralistic traditions of public administrative accounting – such as Germany – failure to successfully negotiate about unexpected gains (or parts thereof) often results in the expiration of these opportunities (or parts thereof) while failure to successfully negotiate about how to distribute unexpected losses does not make them go away. We use the equal split in the loss domain because it was set as the explicit default in the treatment and to increase scenario realism.

[9] All original measures and scale items were translated into German in a triple-blind procedure with due diligence.

probability discounting questionnaire (PDQ). Based on a set of thirty systematically varied trade-off tasks, the PDQ reliably estimates one independent characteristic parameter (h) for individuals' revealed discounting behavior under risk based on their idiosyncratic pattern of choices and preference reversals (Weißmüller 2016). In each PDQ task, respondents have to indicate whether they would rather prefer a secure but relatively smaller hypothetical reward (e.g. €20) or a relatively larger but risky option (e.g. a 75% chance of winning €80 and a 25% chance of €0). This measure is more reliable in describing individuals' actual risk attitudes compared with explicit self-report measures and its systematic and randomized structure makes it robust against conscious manipulation. The parameter potentially ranges between $-\infty$ and $+\infty$ and it was centralized with $\ln(h)$. Individuals with $\ln(h)<0$ are revealed to be risk averse because they, all things being equal, excessively discount probabilistic rewards by the factor of $\ln(h)$. Risk-affine individuals score $\ln(h)>0$.

We measure participants' *tolerance for uncertainty* with Dalbert's (1999) eight-item six-point Likert-type scale. Higher geometric mean-scores indicate higher tolerance for uncertainty. Individuals' *Public Service Motivation* (PSM) was assessed with Kim *et al.*'s (2012) 12-item seven-point Likert-type scale with higher geometric mean-scores indicating higher levels of PSM. We reveal participants' *Social Value Orientation* (SVO) with Bogaert, Boone, and van Witteloostuijn's (2012) nine-item measure in which respondents are asked to share hypothetical amounts of money with an unknown stranger. Higher sum-scores – min.=0 to max.=9 – indicate stronger pro-social motivation. Because trust is a decisive factor for individuals' negotiation behaviour in the context of PPPs (Das and Teng 2001; Chaudhuri, Sopher, and Strand 2002), we use Yamagishi and Yamagishi's (1994) six-item five-point Likert-type scale to assess participants' general propensity to *trust in others*.

The experiment was complemented with a socio-demographic questionnaire assessing individuals' *year of birth*, *gender*, *nationality*, *field of study* (if applicable), *education*, and their

future intention to apply to the public sector, as well as their explicit *attitudes toward the public* and *the private sector* (single Likert-type items ranging from 1='very negative' to 7='very positive'). We control participants' numerical literacy with the first seven items[10] of Weller *et al.*'s (2013) *Abbreviated Numeracy Scale*.

RESULTS

Sample characteristics

Table 1 presents the results of the survey questionnaire. Participants hold average to relatively high levels of PSM (M=4.21, SD=1.01; Cronbach's α=0.874), SVO (M=4.66, SD=3.88), and trust in others (M=3.13, SD=0.71; α=0.828). The sample is relatively risk averse (ln(h): M=0.77, SD=0.42) and tends to avoid uncertainty (M=3.66, SD=0.61; α=0.620). Participants report below average positive attitudes toward both the public (M=3.10, SD=0.92) and the private sector (M=2.81, SD=0.92) but explicit preference for the public sector; t=11.74, p=0.000. The sample associates the realm of the public and the private sector with sharply distinguished separate cognitive clusters that hardly overlap (see appendix B for more detail). Affective coding of these sector-specific associations based on Võ *et al.* (2009)'s psychometric inventory (BAWL-r) reveals an implicit affective preference for the private sector (public: M=0.91, SD=0.40; private: M=0.98, SD=0.32; t=-6.172, p=0.000; d=-0.207), indicating the prevalence of a small anti-public sector bias. Yet, participants' intention to apply to the public sector is slightly above average (M=3.75, SD=1.62). Balance testing with multiple between-group t-tests (appendix C) and pair-wise correlation analysis (appendix D) shows that all covariates are distributed equally between the two treatment groups, indicating that treatment randomization was successful and that the two treatment groups are fit for treatment-level comparison. Lack of numeracy was not a confounding issue (M=4.80, SD=2.08).

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[10] This scale originally comprises eight items of statistical word problems of varying complexity. We omitted the last and most complex item out of considerations regarding questionnaire length-related response fatigue.

[Please place Table 1 about here]

Descriptive negotiation results

Table 2 and figure 2 present the descriptive game statistics (contract level) by negotiation domain and sectoral agency. The game resulted in $n=1,121$ contracts (i.e. bargaining agreements) which reveal strong treatment- and domain-related differences in overall negotiation behavior *ceteris paribus*.

[Please place Table 2 about here]

Sign-controlled two-tailed *t*-testing shows that, in the domain of loss, public agents generally offer to carry higher amounts of losses ($M=-71,714€$, $SD=47,214€$) than private agents ($M=-55,989€$, $SD=44,821€$; $t=11.325$, $p=0.000$, $d=0.343$), that public agents propose substantially smaller counteroffers ($M=-87,351€$, $SD=53,770€$; private agents: $M=-107,909€$, $SD=70,256€$; $t=-10.708$, $p=0.000$, $d=-0.324$) and that public agents agree to settle with substantially higher AMOUNTS of losses for themselves ($M=-80,511€$, $SD=48,920€$) compared with private agents ($M=-69,231€$, $SD=42,039€$; $t=2.230$, $p=0.026$, $d=0.245$).

[Please place Figure 2 about here]

In the domain of gains, differences in negotiation behavior are relatively smaller in effect sizes but still evident in offers (public agent: M=89,164€, SD=54,713€; private agent: M=95,661€, SD=56,041€; t=3.723, p=0.000, d=0.119) and counteroffers (public agent: M=68,747€, SD=45,099€; private agent: M=65,098€, SD=44,995€; t=-2.542, p=0.011, d=-0.081). Public and private negotiators do not differ significantly in the average total AMOUNTS negotiated per round over the course of the whole experiment (public agent: M=81,780€, SD=48,726€; private agent: M=86,017€, SD=45,351€; t=1.217, p=0.224, d=0.089). We hypothesized that public agents are less likely than private agents to follow subjective utility maximizing strategies (*H1*). Because public agents negotiate more benevolently and agree to carry higher shares of losses, *H1* cannot be refuted: Public negotiators are less likely to maximize subjective utility in a PPP setting, *ceteris paribus*.

Figure 3 presents participants' negotiation outcomes by cake-size (c_t), treatment, and domain in case of reaching agreement. Across both domains, public agents propose a smaller number of offers and counteroffers than private agents (see table 2) but public agents' offers are more likely to result in bargaining agreements (loss domain: 56.4% vs. 43.6%; gain domain: 61.4% vs. 38.6%). Across all magnitudes of c_t, public agents' negotiation outcomes follow the predictions of prospect theory more closely than private agents' whose bargaining outcomes are linear and transitive across both domains. In contrast, public agents act relatively more risk affine in the domain of loss. We hypothesized that domain would moderate the relationship between public agency and the likelihood of negotiating to maximize subjective utility such that the relationship is stronger in the domain of loss (*H2*). Since public sector agents respond intransitively in the domain of losses compared with private sector agents and are indeed less likely to maximize their subjective utility, *H2* cannot be refuted. However, the effect is asymmetric and only marginal in the domain of gains.

[Please place Figure 3 about here]

Multivariate analysis

To test the effect of sector-specific affective associations and PSM on negotiation efficiency in context, we conduct linear regression analyses on the total *AMOUNTs* negotiated over all rounds of the game split by domain (main effects in model I), subsequently adding covariates (model II) and explorative interaction effects (models III), see table 3.

[Please place Table 3 about here]

Because negotiator dyads were randomly re-matched after each round to inhibit learning effects and because the number of offers and counteroffers varied across dyads, the models were estimated with heteroscedasticity-robust standard errors and clustered at the individual level (N=118) for conditional contribution. The models are well-specified (F=233.65–36,868.99, p=0.000) and explain a very high amount of variance (gain domain: R=86.1–86.3%; loss domain: R=58.0–58.5%). Variance inflation was not an issue (all mean $VIF \leq 1.99$). In line with the descriptive contract-level results, multivariate analyses reveal that being a negotiator bargaining on behalf of the public sector is associated with achieving lower amounts in the domain of gains (b_I=-4.497, p=0.000). In contrast, public-sector affiliation does not affect overall negotiation outcomes similarly in the domain of losses (b_I=0.081, p=0.968). In contrast to the predictions of prospect theory, the models reveal a substantial but linear magnitude (c_t) effect, affecting bargaining behavior such that agents seek risks in both the domain of loss

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(b_I=0.439, p=0.000) and the domain of gains (b_I=0.494, p=0.000) – in contrast to behaving risk-aversely in the domain of gains.

Adding control variables, we find that implicit sector-specific affect – in the sense of strong emotional involvement based on implicit associations – is positively related to achieving higher amounts of gains (b_{II}=0.829, p=0.482) and higher shares of losses (b_{II}=2.189, p=0.420) but this effect is not statistically reliable and can only be interpreted sign-indicatively. Consequently, *H3* has to be refuted: sectoral affective associations do not immediately influence bargaining efficiency.

Neither revealed risk propensity, trust in others, SVO, nor explicit sectoral attitudes predict individuals' bargaining efficiency. In contrast, uncertainty avoidance functions as a corrective character trait fostering conservatism in bargaining because individuals who tend to avoid uncertainty realized smaller bargain amounts in the domain of gains (b_{II}=-1.268, p=0.059) but also negotiated substantially lower shares of losses for themselves (b_{II}=-2.169, p=0.097).

However, the strongest and most reliable subjective factor driving individual negotiation behavior in a PPP setting is PSM. High (i.e. above scale average) levels of PSM are significantly associated with substantially higher negotiation outcomes in the domain of gains (b_{II}=3.093, p=0.015) but also with a substantially higher likelihood of carrying excess losses (b_{II}=6.257, p=0.025) compared with low-PSM individuals. Further interaction analysis reveals that the effect of high PSM is accelerated asymmetrically by negotiators' sectoral agency and the domain of negotiation (gain: b_{III}=5.138, p=0.049; loss: b_{III}=-4.183, p=0.42). Figure 4 displays the interaction between high vs. low levels of PSM on the mean share of c_t negotiated for themselves[11] by magnitude and by treatment. We find that high-PSM individuals with private agency negotiate slightly more effective in the domain of gain but less effectively in the domain

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[11] As a consequence of the game design, it is beneficial for subjective utility maximizing negotiators to achieve mean shares of c_t>50% in the domain of gains and c_t<50% in the domain of loss.

of loss while high-PSM individuals with public agency perform worse in both domains and across all magnitudes of c_t. This indicates that High-PSM individuals are less likely to follow subjective utility maximizing strategies. Consequently, *H4* cannot be refuted.

[Please place Figure 4 about here]

DISCUSSION

Fairness, opportunism, and fixed-pie bias

Public agents are less likely to pursue subjective utility maximizing negotiation strategies in the domain of losses and generally negotiate less dynamically and more cooperatively by offering and counteroffering relatively higher amounts of excess gains to their private partners. These experimental results show that sectoral agency and negotiation domain affects public and private agents dissimilarly, promoting *fairness* in public partners and *opportunism* in private partners.

Fairness. Our experiment was designed as a zero-sum game in the domain of losses which means that one partner's gain was the other partner's loss. Generally, "[t]he frequency of rejections of disadvantageous counteroffers […in ultimatum games] is often taken as evidence that subjects' desire to be fair outweighs all strategic considerations, or that subgame-perfect equilibrium requires too much sophistication to be descriptive. It is clear that subjects do not perceive their payoffs as purely pecuniary" (Crawford 1997, 16). However, our results show that what exactly individuals perceive as *fair* is in fact sector dependent, resulting in bargaining agreements that mostly maximize private partners' utility instead of sharing risks and returns equally. Our findings reveal that public agents' offers and counteroffers were significantly more likely to result in bargaining agreements between partners which indicates that public agents

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pursued satisficing negotiation strategies aimed at agreement even though they had less individual incentive due to the payout mechanism of the game. This finding is intriguing because it provides a direct empirical response to recent appeals by Bouwman (2018) and Bouwman *et al.* (2019) for more micro-level research into public-sector negotiation as well as to prior conceptual research into the critical success factors of PPPs by Hodge and Greve (2009), Forrer *et al.* (2010), Kee and Forrer (2012) and Reynaers and De Graaf (2014). While many studies assume that PPPs' capacity for generating synergy originated from inspiring public decision makers to imitate their private partners' business-like behavior, our results show that the institutional logics associated with the sectors (maximizing vs. satisficing) persist in bargaining behavior in PPPs and that public agents will not automatically imitate their private partners' strategies. Since treatment groups were strictly balanced, it is fair to assume that public agency might actually function as a behavioral trigger fostering satisficing bargaining behavior closer to the *fair* split in order to promote collaboration while private agency will encourage individual decision makers to pursue subjective utility maximizing strategies.

Opportunism. Prior research by Khadjavi and Lange (2015) shows that individuals tend to behave more selfishly when taking from public compared to private accounts. In dyadic zero-sum games, non-equal splits result in the de-facto loss of utility for one partner to the immediate advantage of the other. Our experiment shows that private negotiators agreed to carry substantially smaller amounts of losses than their private partners. Effectively, this bargaining strategy is a typical example of *active* opportunism (Seggie *et al.* 2013): by violating the premise of equally sharing risks and benefits as set explicitly by the game scenario and simply refusing to agree to close-to-equal splits of gains and losses to the disadvantage of the other partner (Jap and Anderson 2003). Breaching formal or informal partnership agreements (Anderson 1998) and exploiting unexpected events to realize individual benefits are typical examples of active opportunism in PPPs in practice (Kee and Forrer 2012). Consequently, we assume that within its limitations as a laboratory experiment, our experiment illustrates well

that framing negotiation into a cross-sectoral context can promote self-serving behavior to the disadvantage of the public sector.

Individuals' tendency toward self-serving behavior when taking from public compared to private accounts also explains why we find that negotiators with public agency are asymmetrically affected by the domain effect predicted by prospect theory (resulting in public agents' comparatively higher risk-affinity in the domain of losses). In a sense, this finding is in contrast to both the classic assumption of Kahneman and Tversky's (1979) prospect theory and Bækgaard's (2017) empirical finding that citizens prefer risk-affine reforms in the domain of gains (instead of risk-averse reforms) if contextualized in the public sector.

The splits are especially disproportional in the domain of losses which can be explained by the phenomenon of the fixed-pie bias related to the dynamic multi-stage design of the experiment. Originally detected by Bazerman *et al.* (1985) with a study investigating integrative bargaining mechanisms under competition, the fixed-pie bias suggests that in multi-round games, negotiators primarily focus on the potentially competitive nature of the situation even in non-zero-sum games (such as the gain-leg of our experiment) before recognizing the mutual advantage that can be achieved through collaboration.

Where is the publicness bias?

We find that emotional affect toward the sectors – both implicit sector-specific associations and explicit public and private sector attitudes – does not reliably predict bargaining behavior in neither treatment group. This is surprising because a substantial body of behavioral and conceptual research into negotiation behavior suggests that sectoral attitudes and affect will asymmetrically bias choice behavior in the context of public sector decision making (Barry and Oliver 1996; Bazerman *et al.* 2000; Tsay and Bazerman 2009). Positive affect functions as a socio-psychological mechanism that breads trust and helps individual partners to span the

boundaries between their organizations, hence facilitating the development of mutual trust, which is generally assumed to promote equity and fairness within partnerships (Gulati, Wohlgezogen, and Zhelyzhov 2012). Prior conceptual work by Barry and Oliver (1996) and empirical research by Arora *et al.* (2012) on dyadic negotiation points out that individuals' negotiation behavior is moderated by the strength of affect toward the partners involved. The authors stress that basic psychological mechanisms of liking and disliking (especially if they are implicit) are powerful moderators for both pro-socially motivated bargainers who follow negotiation strategies that "reflect a concern for both their own and their opponent['s] outcomes" (Barry and Oliver 1996: 134) and for bargainers incentivized to being competitive (i.e. who primarily operate out of concern for their own subjective utility). Although participants associate the sectors with very distinct cognitive clusters – e.g. *public welfare orientation*, *administration*, and *red tape* for the public sector vs. *for-profit orientation*, *success*, and *pressure* for the private sector (see appendix B) – the affective valance of these clusters does not significantly influence agents' choice behavior in our experiment. The absence of this effect in our data can be interpreted in two ways: First, participants' individual attitudes toward and preferences regarding the sectors are simply not strong enough to result in statistically significant effects because they varied substantially within and between subjects. This interpretation would call for future replication studies with participants holding more extreme sectoral preferences. Alternatively, we could interpret this finding as another indicator for the persistent influence of sectoral agency on bargaining behavior.

Randomly re-matching the negotiator dyads after each round inhibited participants from deriving any knowledge about their opponents' *individual* disposition toward benevolence in bargaining which means that agents could only rely on what they assumed was rational bargaining behavior for their opponent. This finding is an important contribution to the on-going discourse on the so-called anti-public sector bias (Marvel 2015; Weißmüller 2016;

Weißmüller and Vogel 2018) because it shows that the effect of affect-based sectoral biases might actually be conditional to prior learning experiences in context which means that sector-related stereotypes need immediately relevant context-related triggers in order to be effective as biases for choice behavior under risk.

Dark and bright sides of PSM

High levels of PSM substantially affect individuals' negotiation strategies. Irrespective of individuals' sectoral agency, high-PSM negotiators were more likely to bargain in a way that did not maximize their subjective utility but that was closer to the default – and contractually agreed upon rule – of sharing *fairly* (i.e. 50-50) between the two partners. Only in the domain of gains and with relatively small magnitudes of c_t did private agents with high-PSM demand higher shares of excess gains than private low-PSM agents. These results match prior empirical findings by Kanagaretnam *et al.* (2009) who revealed that PSM is positively associated with higher degrees of reciprocal behavior in investment games and with Tepe and Prokop's (2018) lab-based experimental evidence that PSM is strongly and positively associated with risk-averse behavior in lottery games. Similarly to results by Tepe (2016) – who conducted a lab-based experimental trust game with monetary rewards – we find a significant positive correlation between PSM and trust in others (ρ=0.206, p=0.000). However, stated trust in others was not a reliable predictor for bargaining behavior in a PPP setting, rather, our results show that higher levels of PSM are related to a higher likelihood of collaborating by (counter)offering shares of excess gains and losses that are more likely to being accepted by negotiation partners, revealing a relationship between PSM and *trusting in partners' willingness to collaborate* and with finding bargaining solutions that are mutually acceptable for both partners. Our findings reveal an asymmetric interaction between PSM, sectoral agency, and negotiation domain that directly relates to recent laboratory experimental findings on negotiation behavior by Bouwman *et al.* (2019) who also found that public managers with high levels of PSM contribute higher amounts to public goods games, act more cooperatively in repeated negotiation games, and collaborate

more unconditionally, which is helpful in variable-sum games but disadvantageous in constant and zero-sum negotiations.

Our findings provide intriguing quantitative evidence for both dark and bright sides of PSM: On the one hand, pursuing non-subjective utility maximizing bargaining strategies in a scenario as set up by the current experiment (i.e. negotiating about non-essential excess gains and losses in the PPP) reduces the overall profit share generated for the public sector. On the other hand, the goal of the public sector is not to maximize their profit share but to maintain functional collaboration of both partners in order to complete the long-term objective of the PPP and, hence, generate substantial benefits for the general public (Forrer *et al.* 2010). It is important to note that risk affinity and risk aversion "can constitute either competence or incompetence in public [agents], depending on the demand of the position" (Roszkowski and Grable 2009: 460) and their interpretation of the specific context and outcome of their choice behavior. In this sense, high-PSM individuals' willingness to accept lower shares of gains for themselves and their increased likelihood of agreeing to carry higher shares of losses might be indicative of a pragmatic and rational heuristic to apiece their negotiation partners – especially if the high-PSM negotiators acted with public agency and were, hence, aware that they bargained with a private and potentially self-interested agent (Simon 1945). In this way, the experimental outcomes resonate with one pillar of Schott and Ritz's (2017) conceptual framework of the potentially negative ("dark") sides of PSM. The authors point out that high-PSM individuals find it easier to derive moral justification for their behavior – even if it directly contradicts explicit bureaucratic rules or immediate organizational goals – as long as they perceive their behavior as consistent with the primary goal of serving the public interest. For high-PSM individuals – i.e. people who are motivated to serve the plight of the general public – minor acts of self-sacrifice in bargaining might appear as the *natural* (contextually triggered heuristically rational) behavioral strategy related to their commitment to the public interest if they feel that their excess contribution will help the PPP thrive in the long run by appeasing their presumable

self-interested private parters. Hence, from a long-term perspective of public service motivated public agents, bargaining for *satisficing* – instead of maximizing – results might be the rational strategy in PPP negotiations.

Limitations and future research

Like any empirical study, ours is subject to limitations and calls for future research. One shortcoming is that conducting lab experiments naturally comes at the expense of some ecological reliability because they add additional layers of abstraction. Yet, using experimental methods with strictly controlled and randomized trials is a reliable way to scrutinize causal mechanisms (Jilke, Van de Walle, and Kim 2016) and our strictly experimental approach circumvents the typical problem that self-reported measures often hardly correlate with real behavior (Fan *et al.* 2006). To test the external validity of our findings we strongly encourage future research replicating this study both directly and conceptually but also qualitative studies in scrutinizing bargaining dynamics in real PPPs.

Another limitation relates to the sampling procedure. Although not representative for the full population, our sample of graduate students of PA and related fields is an especially interesting target group for PA research because future decision makers in PA are likely to be recruited from this particular population. Furthermore, using student samples is only problematic for ecological validity if the treatment effect is moderated by another (latent) variable that is different in student compared with non-student samples (Druckman and Kam 2011). We do not assume such differences to be evident in the case of the current experiment. Furthermore, Germany has a tradition of an explicit legal and organizational separation between the public and the private sector resulting in sectoral boundaries that are psychologically very salient. We believe that the strong effects of framing negotiators into public and private sector roles might be less pronounced if the experiment was replicated in countries with a less prevalent distinction between the realms of the public and the private sector. Replications conducted in settings of

dissimilar administrative traditions – especially if combined with field replications with practitioners – will help reveal the reliability of and transferability of our findings into other cultural and contextual settings of strategic bargaining in PPPs.

Practical implications and conclusion

The empirical findings of this study substantially advance our understanding of causal micro-level mechanisms of bargaining in PPPs. They illustrate the complex interaction of publicness as a meso-level context providing agency and meaning with domain and micro-level character traits and motivations, especially PSM. Prior studies by Bing *et al.* (2005), Kee and Forrer (2012), and Wang *et al.* (2018) point out that poor risk allocation and failure to deal with emergent and dynamic uncertainties are the neuralgic points that often lead to PPP failure. The current study explored the effects of contextualized sectoral agency, domain, and PSM on negotiation behavior in PPPs and its empirical evidence is directly relevant for theory and practice.

Essentially, PPPs are justified on the premise of two fundamental conditions (Forrer *et al.* 2010): first, the assumption that public partners lack the strategic resources, capacities, and capabilities to deliver many types of public goods and services in a cost-efficient way – but still retain the ultimate responsibility for PPP success – and, second, the presumption that public agents (i.e. governments) can partner with private firms in a mutually beneficial and sustainable way that allows the public partner to gain access to the resources required to implement the cost-effectiveness of private delivery while creating a choice environment in which both partners' "fortunes are linked to the success of the overall project, providing the incentives for both sides to cooperate, innovate, and work collaboratively toward the success of the enterprise" (Forrer *et al.* 2010: 477).

Our experimental results suggest a third fundamental condition for PPP success, namely partners' ability for *matching interpretation*. Agents in strategic alliances such as PPPs

generally assume that all partners share the same understanding of both the cooperation agreement and the contribution that is expected (implicitly and explicitly) from each partner (Gulati, Wohlgezogen, and Zhelyzhov 2012). However, our experiment shows that subjective expectations can be idiosyncratic and are influenced by agents' subjective interpretation of this agreement, their sectoral agency, their individual motivation (especially PSM), as well as the bargaining domain. Surprisingly, it is uncertainty avoidance – and not general risk avoidance or a lack of trust in others – that functions as a corrective character trait promoting conservative bargaining behavior. These findings stand in contrast to prior laboratory game-based research by Güth (1995) and Freundt and Lange (2017) who found that risk attitudes and prosocial preferences directly influenced choice behavior and that agents with prosocial motivations will prefer even (i.e. "*fair*") splits and a more balanced allocation between partners. Our empirical results show that prior findings do not necessarily translate linearly into a cross-sectoral bargaining context but are moderated by sectoral agency and domain.

This study provides experimental evidence that public negotiators need to consider that their private partners' perceptions, strategies, and logics in decision making might deviate from their own logics, which are based on the agenda of avoiding long-term harm to society and instead increase public welfare (Ghere 2001). Prior conceptual research by Gulati, Wohlgezogen, and Zhelyzhov (2012) and Saz-Carranza and Longo (2012) points out that partners' failure to cooperate in strategic alliances is rooted in the prevalence of essentially diverging and misaligned meta-interests: In PPPs, private and public sector logics coexist and complicate strategic alignment and cooperation because institutional logics are the basic taken-for-granted rules that guide individuals' behavior in organizations. From the theoretical lens of agency theory, public and private agents' interests and logics are essentially incongruent and are bound to produce tension inherent in any PPP. Yet, PPPs' promise of creating collaborative advantage through synergy depends exactly on this heterogeneity because it is each partner's ability to contribute different resources and behaviors to the partnership (Seggie *et al.* 2013). One way to

solve this problem is to install clear and congruent performance measures in critical areas such as risk, cost and benefits and knowledge sharing within the PPP (Kee and Forrer 2012). Consequently, public partners who need sufficient in-house expertise to design and monitor these areas in order to protect the public interest. While PPPs are not the solution to every problem, the delivery of public goods and services through PPPs "does not have to be a zero-sum game, where the private sector profits and the public sector is taken advantage of" (Kee and Forrer 2012: 197).

The surprisingly strong interaction effects between agency and PSM on bargaining behavior are directly relevant for practitioners because high-PSM people are especially likely to self-select into public sector employment (Wright and Grant 2010; Tepe 2015). It is not unlikely that the very participants of the current study will seek public sector employment and will eventually engage in professional cross-sectoral negotiation. Kee and Forrer (2012: 198-199) explicitly point out that "PPPs […] must be led by individuals who are public "stewards" and who encourage "stewardship" throughout the organization […] entrail[ing] a commitment to the public interest and protection or conservation of ethical values". The authors suggest that this this essential public value-oriented stewardship in PPPs could be achieved by developing a shared ethos directly related to the core principles of PSM. This shared ethos based on public value and service motivation could manifest in a shared code of conduct required of all partners of the PPP irrespective of their sectoral affiliation and particular subjective interests.

Furthermore, practitioners should be aware that public and private agents react dissimilarly to magnitudes in the domain of losses with public agents acting relatively more risk affine and benevolent – especially high-PSM agents. Asides from creating awareness about this tendency, public organizations might want to consider implementing incentive structures typically installed in the private sector i.e. motivating their agents by performance-based benefits related to the outcome of their bargaining while explicitly stressing the benefits of their

accomplishments for the general public. Public agents with high-PSM might respond especially well to reminders stressing that following equal-split negotiation strategies benefits the general public since they indirectly bargain on their behalf and potentially save hard-earned tax-money to be invested into public goods and services in the future.

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Figure 1: Theoretical model
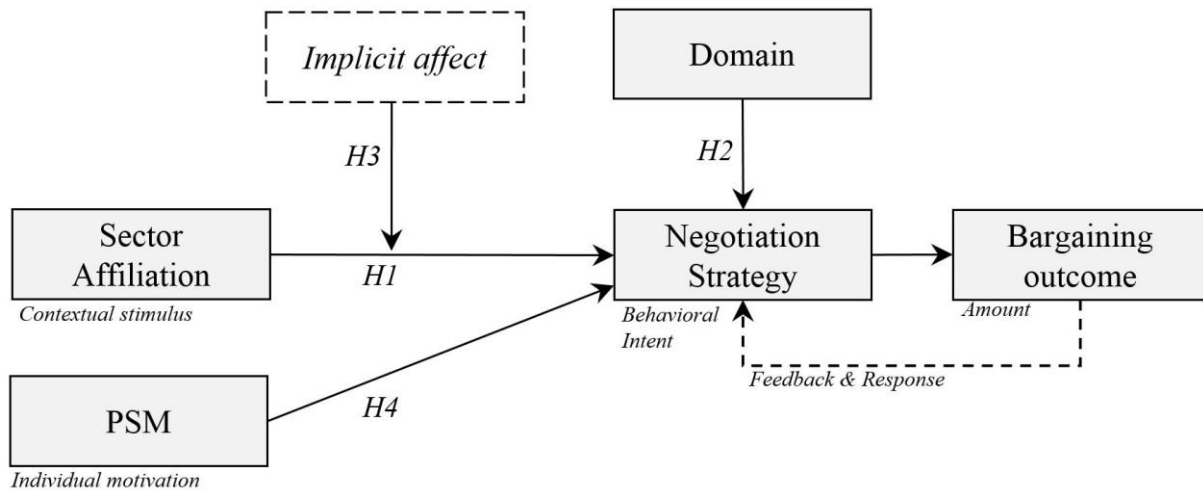
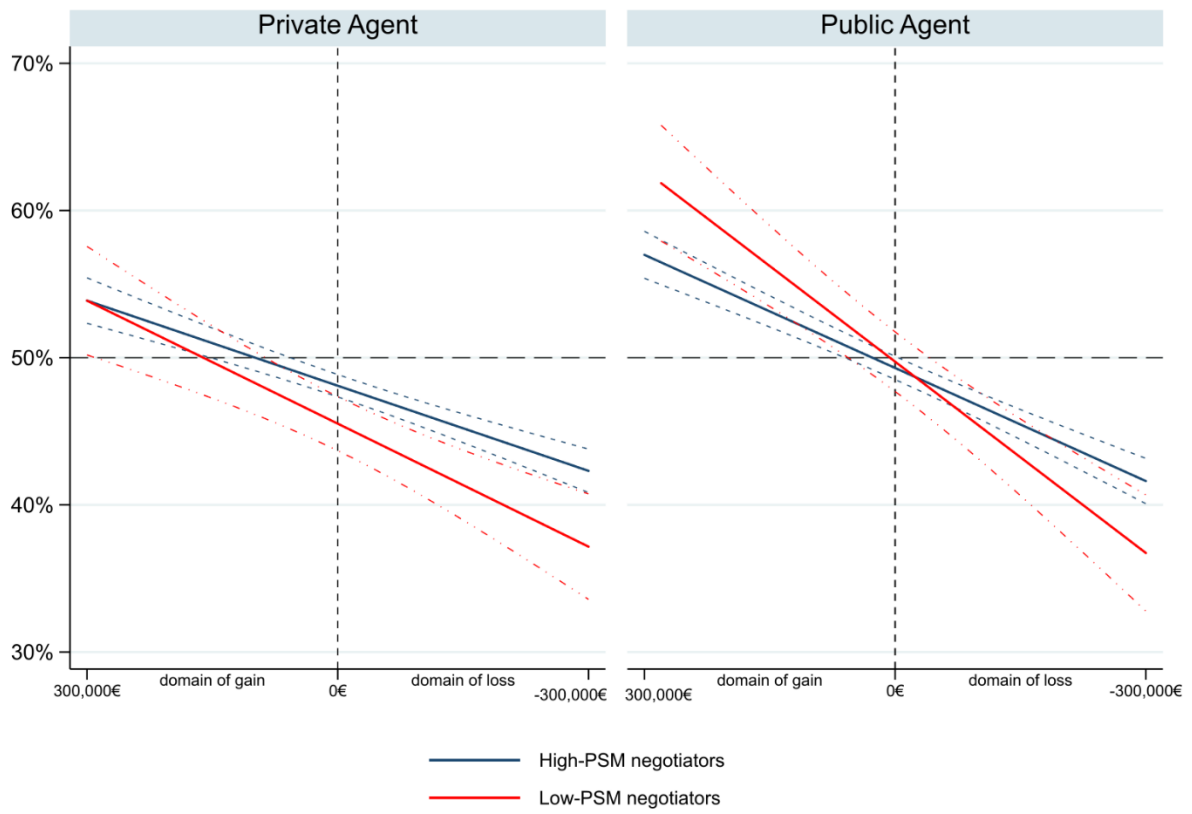**Figure 2:** Mean negotiation outcomes per round by treatment and domain
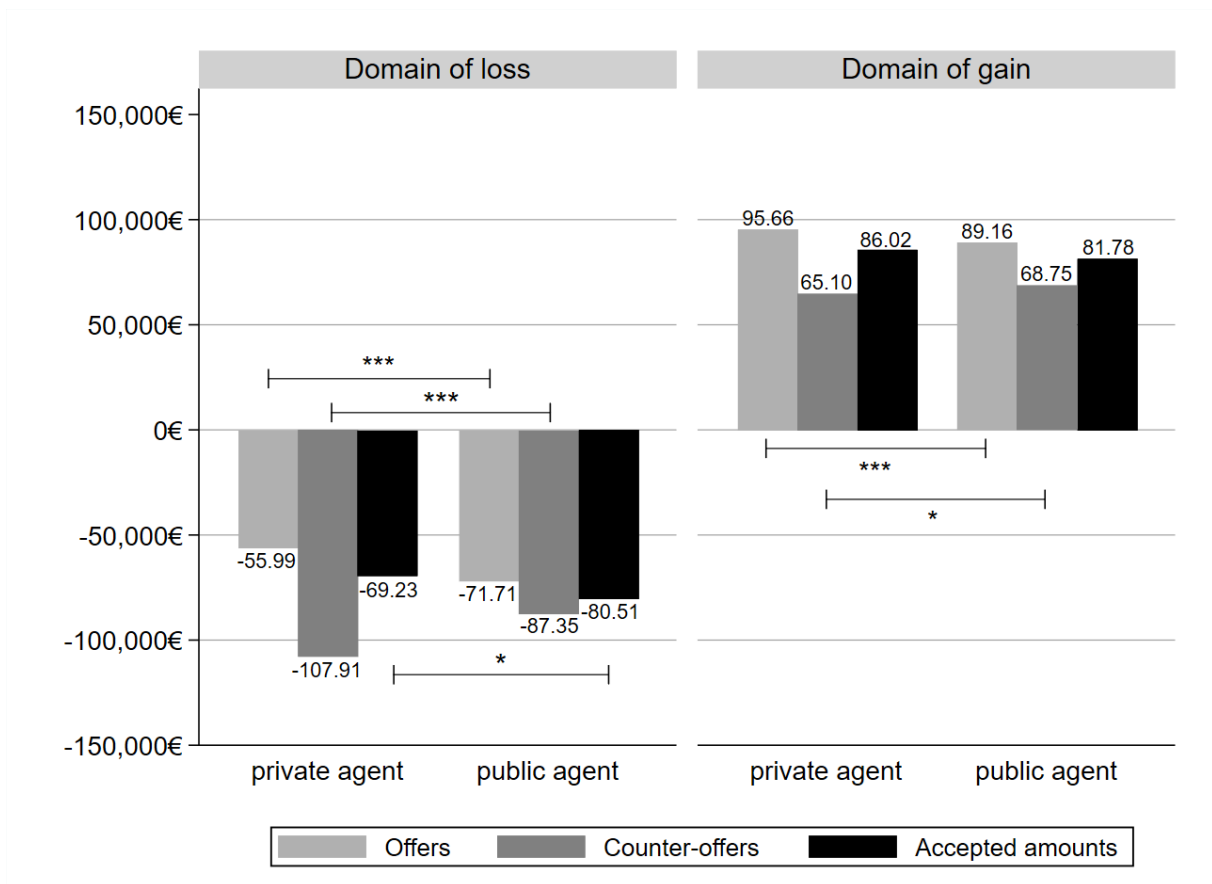
Figure 3: Subjective negotiation outcomes by treatment, sorted by magnitude (c_t)
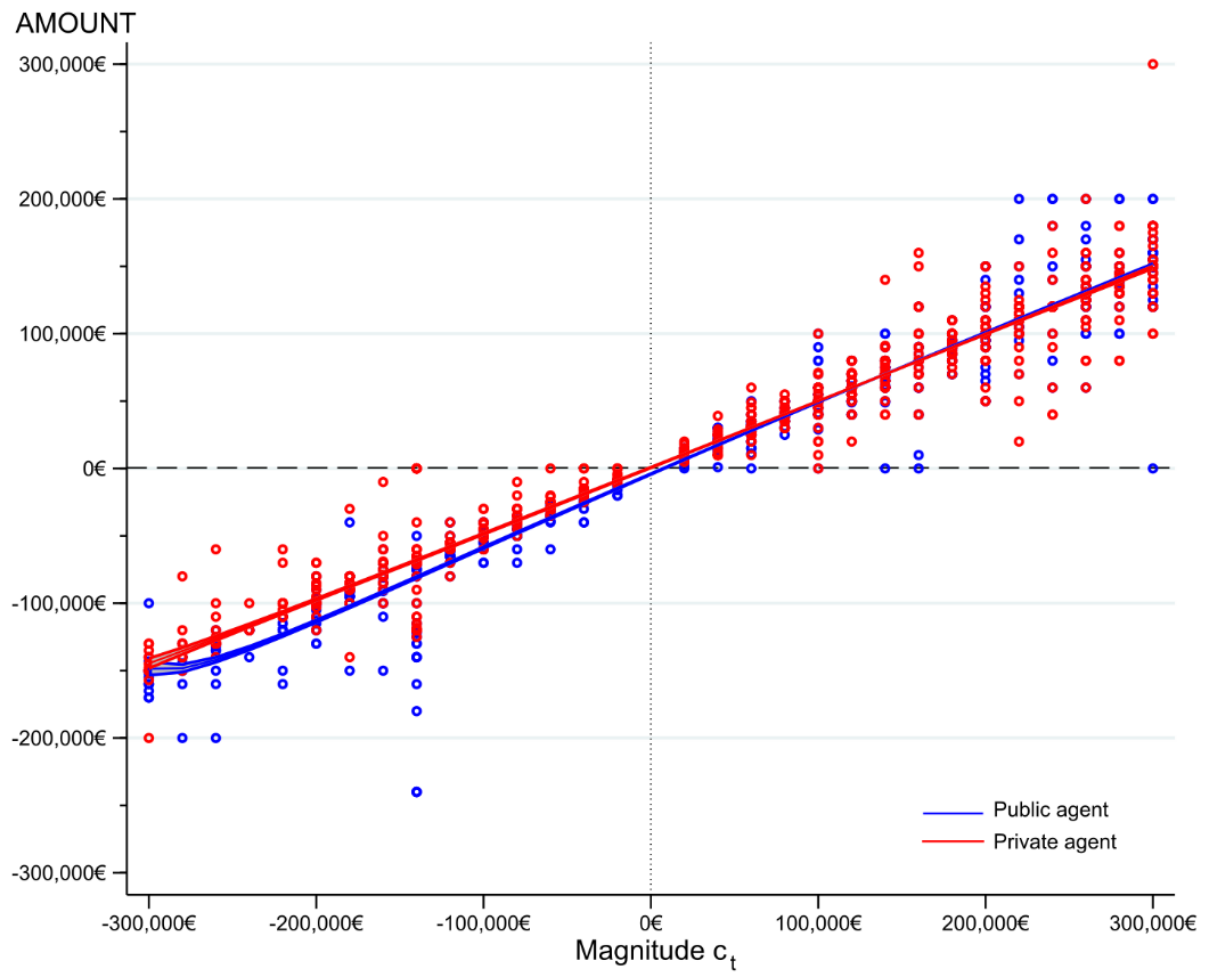
Note: Shaded areas indicate 95%-CI.

Figure 4: Marginal effect of high PSM on mean share of c_t by treatment

Note: Dotted areas indicate 95%-CI.

Table 1: Descriptive sample statistics

Variable	*min.*	*max.*	*M*	*SD*
Female	0	1	.542	.498
Age (years)	20	45	25.846	4.788
PSM	1	7	4.213	1.010
SVO	1	9	4.661	3.888
Trust in others	1	5	3.128	.707
Risk preference [a]	0	1	.771	.420
Uncertainty avoidance	1	6	3.659	.605
Explicit attitude				
public sector	1	7	3.102	.919
private sector	1	7	2.814	.915
Intention to apply to public sector	1	7	3.754	1.622
Associative implicit affect [b]				
public sector	0	1.388	.906	.399
private sector	0	1.459	.982	.319
Numeracy	0	7	4.797	2.078

Note: N=118. [a] revealed measure normalized with $\ln(h)$. [b] revealed with BAWL-r.

Table 2: Descriptive game statistics

Contract-level	Public agent			Private agent			*t*-test		Cohen's
	Obs.	*M*	*SD*	*Obs.*	*M*	*SD*	*t*	*p*	*d*
Loss domain									
AMOUNT	190	-80,511	48,920	147	-69,231	42,039	2.230	**.026**	**.245**
Offers	1,967	-71,714	47,214	2,458	-55,989	44,821	11.325	**.000**	**.343**
Counteroffers	1,967	-87,351	53,770	2,458	-107,909	70,256	-10.708	**.000**	**-.324**
Gain domain									
AMOUNT	481	81,780	48,726	303	86,017	45,351	1.217	.224	.089
Offers	1,907	89,164	54,713	2,036	95,661	56,041	3.723	**.000**	**.119**
Counteroffers	1,907	68,747	45,099	2,036	65,098	44,995	-2.542	**.011**	**-.081**

Note: *t*-tests two-tailed.

Table 3: Regression analysis on *AMOUNT*

	Gain domain						Loss domain					
	I		*II*		*III*		*I*		*II*		*III*	
Treatment effect												
Public-sector agent	-4.497***	(.83)	-4.550***	(.84)	-8.690**	(.001)	.081	(2.02)	.092	(1.95)	3.450	(.469)
Magnitude (c_t)	.494***	(.00)	.363***	(.00)	.494***	(.000)	.439***	(.01)	.439***	(.01)	.439***	(.000)
Control variables												
Sector-specific affect [a]			.829	(1.18)	.597	(.626)			2.189	(2.70)	2.384	(.373)
Risk aversion [a]			-.671	(.87)	-.503	(.541)			.467	(2.12)	.327	(.877)
Explicit attitude: public			-.403	(.42)	-.403	(.302)			-.982	(.98)	-.981	(.324)
Explicit attitude: private			.067	(.42)	.072	(.860)			-1.657	(1.10)	-1.662	(.132)
Trust in others			.196	(.57)	.177	(.731)			-1.372	(1.74)	-1.354	(.425)
Uncertainty avoidance			-1.268†	(.67)	- 1.178†	(.051)			-2.169†	(1.30)	-2.232†	(.086)
High PSM			3.093**	(1.25)	.564	(.637)			6.257*	(2.76)	8.284*	(.044)
SVO			-.065	(.09)	-.050	(.575)			.116	(.26)	.105	(.690)
Numeracy			.016	(.21)	-.013	(.950)			.148	(.49)	.170	(.729)
Two-way interaction												
Public-sector agent × high PSM					5.138*	(.049)					-4.183	(.424)
Intercept	-2.055***	(.45)	.543	(3.77)	2.420	(.500)	-.860	(1.52)	10.368	(8.93)	8.872	(.325)
Observations	1,770		1,770		1,770		1,676		1,676		1,676	
F	36,868.99***		7,842.64***		7,302.15***		1,185.15***		251.81***		233.65***	
VIF (mean)	1.00		1.13		1.99		1.00		1.12		1.99	
R^2	.861		.862		.863		.580		.584		.585	
RMSE	16.63		16.62		16.59		35.01		34.93		34.93	

Notes: Linear regression estimates on *AMOUNT* split by domain and clustered at subject level (*N*=118) for conditional contribution; Model *I*: main effects; Model *II*: full model including control variables; Model *III*: exploratory post-hoc analysis; models *I* and *II*: heteroscedasticity-robust standard errors in parentheses; Model *III*: *p*-values in parentheses; † $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. [a] Item revealed by implicit measurement.

APPENDICES (Supplementary online material)

A Experimental setup and treatment stimuli

A.1 Experimental design

English translation, original codebook and z-Tree programming code upon request.

1	**General introduction to lab session, random distribution of participants to cubicles.**
2	**Introduction to negotiation scenario [all study participants]:** 'Please consider the following scenario: A few years ago, new building land has been laid out in a town nearby on which a new large town district is to be built. This project is considered to be very positive for future urban development by all stakeholders. However, the investment costs for the construction of roads and for the development of the site are very high so that the city cannot bear these on its own and, consequently, has established a long-term partnership with a large construction company from the private sector. When the partnership was formally established, it has been contractually agreed that scheduled costs and returns of this project are going to be shared equally among both partners. This partnership has been working very well for some time and everything worked out just as scheduled. In the current period, however, the project has become a bit more dynamic, sometimes creating excess costs as well as excess returns from time to time. Unfortunately, no special clause was agreed upon for cases like this. The only option is to directly negotiate about how the extra profits and losses are to be shared between the two partners.
3	**Role framing vignettes and explicit sector specific associations [prime]:** Study participants randomly receive one of two vignette treatments:

| | A | **[Public Sector Treatment]**

Imagine that you are a senior civil servant in the higher service of the city administration. You have been appointed as the chief negotiator on behalf of the city to settle this dispute with the construction firm.

Please think carefully about the role you are taking on in this experiment. Imagine how it is to work in the public sector, how you would feel in this situation. What are the immediate associations that come to your mind in relation to the public sector and to the people working in the public organizations?

Please specify at least 3 attributes: |

		Immediate association with the public sector in general: [open response]
		Immediate association with the people working in the public sector: [open response]
		How do you feel in the role that you have been given as chief negotiator for the city administration? [open response]
		As a reminder, you are a senior civil servant in the higher service of the city administration and you have been appointed as the chief negotiator on behalf of the city to settle this dispute with the construction firm. Your salary is fixed and independent of the outcome of the negotiation.
	B	**[Private Sector Treatment]**
		Imagine that you are working as a senior manager in the private sector construction firm. You have been appointed as the chief negotiator on behalf of the company to settle this dispute with the city.
		Please think carefully about the role you are taking on in this experiment. Imagine how it is to work in the private sector, how you would feel in this situation. What are the immediate associations that come to your mind in relation to the private sector and to the people working in the private, for-profit organizations?
		Immediate association with the private sector in general: [open response]
		Immediate association with the people working in the private sector for for-profit firms: [open response]
		How do you feel in the role that you have been given as chief negotiator for the private-sector company? [open response]
		As a reminder, you are a senior manager working at the for-profit construction firm and you have been appointed as the chief negotiator on behalf of the company to settle this dispute with the city. Your salary is flexible and depends on how well you negotiate for your firm. You know that your boss will reward you with a considerable bonus equivalent to how much you score in for your company, the better you negotiate in total, the higher your payout!
4		**Cross-sectoral negotiation game** [15 rounds in domain of gain, 15 rounds in domain of loss, randomized dyads of two partners, negotiators recombined after each round.
	4.1	[**Instructions** round 1 to 15]: "In this period, the partnership has generated excess profits! Please negotiate about the individual share of profits for each partner! You have 45 seconds to come to a conclusion, otherwise the excess profit expires, please negotiate now!" **[Amounts ranging from 20 to 300 *€1,000; order randomized]**

	4.2	[**Instructions** round 16 to 30]: "In this period, the partnership has resulted in excess losses! Please negotiate about the individual share of losses for each partner! You have 45 seconds to come to a conclusion, otherwise the excess losses will be distributed in a 50-50 share, please negotiate now!"] [**Amounts ranging from -20 to -300 *€1,000; order randomized**]
	4.3	[**Overview of negotiation amounts for each round by domain:**]

Round No.	Domain of gains	Domain of losses	Round No.
1	240,000 €	-240,000 €	16
2	160,000 €	-160,000 €	17
3	220,000 €	-220,000 €	18
4	40,000 €	-40,000 €	19
5	100,000 €	-100,000 €	20
6	200,000 €	-200,000 €	21
7	20,000 €	-20,000 €	22
8	60,000 €	-60,000 €	23
9	120,000 €	-120,000 €	24
10	80,000 €	-80,000 €	25
11	300,000 €	-300,000 €	26
12	260,000 €	-260,000 €	27
13	280,000 €	-280,000 €	28
14	180,000 €	-180,000 €	29
15	140,000 €	-140,000 €	30

|

	End of z-Tree game, followed by survey:	
1	**SVO (Bogaert, Boone, and van Witteloostuijn 2012)**	
2	**Tolerance for uncertainty (Dalbert 1999)**	
3	**Probability discounting questionnaire (Madden, Petry, and Johnson 2009)**	
4	**Socio-demographic questionnaire:** year of birth; gender; citizenship; field of study; intention to apply to public sector.	
5	**PSM (Kim *et al*. 2012)**	
6	**Explicit attitude about the public sector**, single 7-point Likert-type item: 'If you think about the public sector in general your thoughts are…'	

	1='very negative' to 7='very positive'.
7	**Explicit attitude about the private sector**, single 7-point Likert-type item: 'If you think about the private sector in general your thoughts are…' 1='very negative' to 7='very positive'.
8	**Trust in others (Yamagishi and Yamagishi 1994)**
9	**Numeracy (Weller *et al*. 2013)**
10	**Acknowledgement, payout of incentives, end of study.**

A.2 Instructions to z-Tree experiment (original German version)

Instruktionen zu „VERHANDELN in PPPs"

Herzlich willkommen im Experiment „Verhandeln in PPPs"! Vielen Dank, dass Sie teilnehmen!

Im Folgenden nehmen Sie an einem **mehrstufigen, dynamischen Entscheidungsexperiment** teil. **In dieser Studie geht es darum herauszufinden, wie Menschen in bestimmten Situationen verhandeln.**

Bitte stellen Sie sich hierfür folgendes Szenario vor [dieser Text erscheint auch gleich als erstes auf Ihrem Bildschirm]:

Vor einigen Jahren ist in einer nahegelegenen Stadt neues Bauland ausgewiesen worden, auf dem ein neuer, großer Stadtteil entstehen soll. Dieses Projekt wird von allen Beteiligten als **sehr positiv** für die zukünftige Stadtentwicklung betrachtet.

Allerdings sind die **Investitionskosten** für den Bau von Straßen und für die Erschließung des Geländes **sehr hoch**, sodass die Stadt diese Kosten für die Quartiersentwicklung nicht alleine tragen kann und daher mit einem großen Bauunternehmen in einer **langfristigen Partnerschaft** zusammenarbeitet. Das **Bauunternehmen** stammt aus dem **privatwirtschaftlichen Sektor, d.h. es ist profitorientiert**, während die **Stadt ein öffentlicher Akteur** ist, d.h. **dem Gemeinwohl verpflichtet ist und keine Gewinnabsicht hat.**

Als diese Partnerschaft gegründet wurde, wurde vertraglich festgelegt, dass sich **beide Partner** die **Kosten und die Erträge**, die durch dieses Projekt erzeugt werden, **gleichmäßig teilen wollen**.

Diese Partnerschaft funktioniert nun schon seit mehreren Jahren sehr gut und alles läuft so wie vereinbart.

Allerdings ist in der aktuellen Planungsperiode **etwas Unvorhergesehenes passiert**: Das **Projekt entwickelt sich dynamischer als zuvor angenommen** und manchmal kommt es nun dazu, dass **zusätzliche Erträge** und auch **zusätzliche Verluste** erzeugt werden. Leider wurde für diese Fälle **keine spezielle Vertragsklausel vereinbart**, sodass nun Uneinigkeit darüber herrscht, wie diese unplanmäßigen Posten aufgeteilt werden sollen.

Die einzige Option ist nun, dass die beide Partner direkt miteinander verhandeln um auszumachen, wer welchen Teil dieser ungeplanten Erträge und Verluste tragen soll.

→   Dieses Verhandeln wird gleich **Ihre Aufgabe** sein!

Auf Ihrem Bildschirm erscheinen nach diesem Szenario gleich noch zusätzliche Informationen zu der jeweiligen **Rolle**, **welche sie im Rahmen dieses Experiments einnehmen** und eine **kleine Aufgabe** hierzu. **Bitte lesen Sie die Informationen gleich aufmerksam durch**, sie sind **sehr wichtig** für das Experiment und auch **für Ihre Auszahlung am Ende des Experiments**!

Es gibt **zwei verschiedene Rollen**: Ihre Rolle ist **entweder die eines Beamten** bzw. einer **Beamtin im höheren Dienst der Stadtverwaltung**, d.h. Sie verhandeln zu Gunsten der Stadt und des Gemeinwohls, **oder die eines strategischen Managers bzw. einer strategischen Managerin des**

großen Bauunternehmens, d.h. Sie verhandeln zu Gunsten des privatrechtlichen Bauunternehmens.

Sie verhandeln immer zu zweit, ein Unterhändler für die Stadt, der andere für das Bauunternehmen. **Nach jeder Runde, werden Sie zufällig einem neuen Partner zugelost.**

Ihre Aufgabe wird es sein, in insgesamt **31 Runden** Angebote zu der Aufteilung der zusätzlich entstandenen Erträge und Verluste zu machen, indem Sie eingeben, wieviel Sie für Ihre Organisation beanspruchen und was die jeweilige Partnerorganisation übernehmen soll.

Bitte beachten Sie aber, dass Sie nur **45 Sekunden pro Runde** Zeit haben, um sich zu einigen. Sie können immer auch mehrere (verschiedene) Angebote hintereinander abgeben. Beide Partner können gleichzeitig Angebote machen, Sie müssen nicht aufeinander warten.

In den **Runden 1 – 15** geht es darum, **zusätzliche ERTRÄGE aufzuteilen**. Diese können **ganz oder auch nur anteilig** unter den beiden Partnern aufgeteilt werden! Wenn es Ihnen nicht gelingt, innerhalb dieser Zeit eine Einigung über ERTRÄGE zu erzielen, dann verfällt der Ertrag und keiner der beiden Partner erhält in dieser Runde etwas.

In den **Runden 16 – 31** geht es darum, **zusätzliche VERLUSTE aufteilen**. Diese **müssen vollständig (!)** unter den beiden Partnern aufgeteilt werden! Wenn es Ihnen nicht gelingt, innerhalb dieser Zeit eine Einigung über VERLUSTE zu erzielen, dann trägt jeder Verhandlungspartner die Hälfte der Verluste. Hier müssen Sie immer auch das MINUS miteingeben.

Die nachfolgende Grafik zeigt, wie der **Screen in den Verhandlungsrunden** aussieht:

In der Mitte des Bildschirms erscheint der Betrag, über den in der jeweiligen Runde verhandelt werden soll (entweder ein ERTRAG oder ein VERLUST). In die **blauen Kästen** darunter tragen Sie Ihr Angebot zur Aufteilung dieses Betrags **in ganzen Zahlen** ein (bei den Verlusten das MINUS nicht vergessen!) und klicken dann auf VORSCHLAGEN. Die Angebote, die Sie vorschlagen, erscheinen links unten. Die Angebote, die Ihr Verhandlungspartner Ihnen vorschlägt, erscheinen **rechts unten**. Wenn Sie mit einem Angebot einverstanden sind, **markieren Sie es bitte mit der Maus** und klicken auf AKZEPTIEREN.

Sie können so viele Angebote unterbreiten wie sie möchten, solange bis entweder einer der beiden Verhandlungspartner ein Angebot akzeptiert hat, oder die Zeit abgelaufen ist. Die verbleibende Zeit in Sekunden wird Ihnen rechts oben angezeigt.

Alle durch die Verhandlungen erhaltenen Erträge und Verluste werden aufsummiert und **beeinflussen die Auszahlung am Ende des Experiments**. Bitte versuchen Sie so gut wie möglich zu verhandeln!

Für diejenigen in der **Rolle des Beamten bzw. der Beamtin** gilt: Jeder einzelne Euro, den Sie für die Stadt herausholen, **kommt der Gemeinschaft zu Gute**, schließlich handelt es sich um Steuergelder, die investiert wurden. **Ihr eigenes Gehalt ist von dem Ergebnis der Verhandlungen nicht betroffen!** Das bedeutet, dass Sie unabhängig von Ihrem Verhandlungsergebnis **€10** am Ende des Experiments erhalten werden.

Für diejenigen in der **Rolle des Managers bzw. der Managerin** gilt: Jeder einzelne Euro, den Sie für das Unternehmen herausholen, **kommt indirekt auch Ihnen selbst zu Gute**! Sie wissen, dass Ihr Chef Ihr Gehalt relativ zu Ihrem Verhandlungserfolg erhöhen oder abmindern wird. Je mehr Sie für das Unternehmen heraushandeln, desto höher Ihr Gehalt in diesem Szenario!
Das bedeutet, dass **Ihre Auszahlung am Ende des Experiments davon abhängt, wie gut oder schlecht Sie im Vergleich zu allen anderen Teilnehmern verhandeln**.

Nach den 31 Runden folgt noch ein anonymer Fragebogen. Ihre Antworten dort haben keinen Einfluss auf Ihre Auszahlung. Bitte antworten Sie ganz spontan und so ehrlich wie möglich.

Haben Sie noch Fragen zum Experiment?

Bitte halten Sie sich bereit, gleich geht es los!

A.3 Z-Tree code of negotiation game treatment (.ztt) and questionnaire (.ztq)

Supplementary online material:

<<< WBV_2019_Negotiation_Treatment.ztt >>>

<<< WBV_2019_Negotiation_Questionnaire.ztq >>>

B Explicit sector-specific associations (English translation)

	Public sector	*n*	f_i [b]	*Valence* M [a]	*Valence* SD	**Private sector**	*n*	f_i [b]	*Valence* M [a]	*Valence* SD
1	Public welfare-oriented	29	15.0	.94	1.10	Profit-oriented	40	21.5	.50	1.64
2	Administration	22	11.3	-1.12	1.25	Success	27	14.5	2.10	.97
3	Red tape	19	9.8	-1.90	.57	Pressure	18	9.7	-1.59	1.05
4	Respectable	17	8.8	2.40	1.42	Respectable	16	8.6	2.40	1.42
5	Procurement	15	7.7	-.70	.68	Security	11	5.9	1.32	1.41
6	Nuisance	15	7.7	-1.90	.57	Egoism	10	5.4	-1.10	1.37
7	Neutrality	14	7.2	.75	.97	Relevance	10	5.4	.94	1.07
8	Rules	11	5.7	-.40	1.19	Power	9	4.8	.10	1.37
9	Security	11	5.7	1.32	1.41	Goal-oriented	8	4.3	2.00	1.10
10	Due-diligence	9	4.6	1.40	1.08	Neutral	7	3.8	.00	.00
11	Power	8	4.1	.10	1.37	Amorality	5	2.7	-2.05	1.19
12	Federal state	6	3.1	-.53	1.26	Identity	4	2.2	1.26	1.21
13	Money	6	3.1	1.60	.97	Audacity	4	2.2	2.20	0.63
	Sub-total	182	93.8				169	90.9		
	other terms [c]	12	6.2			other terms [c]	17	8.1		
	Total	194	100.0				186	100.0		

Notes: [a] Mean emotional valence range: *min.* = -3.0, *max.* = 3.0; [b] Frequencies in %; [c] all other items $f_i < 3.0\%$; [d] all other items $f_i < 2.0\%$.

C Treatment balance

Variable	Public treatment		Private treatment		t-test	
	M	*SD*	*M*	*SD*	*t*	*p*
Female	.525	.504	.559	.500	.367	.715
Age (years)	25.76	4.660	25.90	4.870	.157	.876
PSM	4.316	1.043	4.110	.973	-1.111	.269
SVO	4.407	3.900	4.915	3.892	.709	.480
Trust in others	3.111	.730	3.145	.690	.264	.792
Risk preference [a]	.638	1.190	.859	1.133	1.030	.305
Uncertainty avoidance	3.692	.584	3.627	.628	-.581	.563
Explicit attitude						
public sector	3.051	.879	3.153	.962	.600	.550
private sector	2.780	1.014	2.848	.811	.401	.689
Intention to apply to public sector	3.576	1.621	3.932	1.617	1.194	.235
Associative implicit affect (*n*=385)	.906	.399	.982	.319	-1.130	.261
Numeracy	4.848	2.007	4.746	2.162	-.265	.792
Latency of sector-specific evaluation (*s*)	99.475	51.834	102.288	56.793	.281	.779

Note: N=118; n_{public}=59; $n_{private}$=59; two-tailed *t*-test. [a] revealed measure normalized with $\log(h)$.

D Correlations and reliabilities

		1	2	3	4	5	6	7	8	9	10	11	12	13
Study variables														
1.	AMOUNT	–												
2.	Public agency	-.020	–											
3.	Loss domain	.210***	.000	–										
Control variables														
4.	Risk aversion	.006	-.181***	.002	–									
5.	Uncertainty avoidance	-.037*	.055**	.001	.078***	–								
6.	PSM	.026	.104***	.001	.024	.305***	–							
7.	SVO	.027	-.065***	-.001	-.048**	-.051**	.266***	–						
8.	Intention to apply (public sector)	.002	-.112***	-.001	-.058***	-.022	.248***	.085***	–					
9.	Explicit attitude (public)	-.006	-.057***	.000	-.029	-.018	.186***	.157***	.401***	–				
10.	Explicit attitude (private)	-.057***	-.037*	-.002	.221***	.049**	-.275***	-.220***	-.267***	-.275***	–			
11.	Trust in others	-.018	-.025	.000	.047**	.019	.206***	.161***	-.018	.132***	.009	–		
12.	Age (years)	.025	-.014	-.002	-.025	.157***	.191***	.211***	.057***	.063***	-.211***	.015	–	
13.	Female	-.014	-.033*	-.000	-.056***	-.122***	.172***	.070***	.165***	.067***	-.208***	-.010	-.121***	–
14.	Numeracy	.018	.023	-.002	-.141***	-.038*	.152***	.044**	-.034*	-.055***	.095***	.202***	.022	-.107***

Note: $* p < 0.05$, $** p < 0.01$, $*** p < 0.000$.