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**CONNECTING BRIBERY, PUBLIC SERVICE MOTIVATION, AND
SOCIAL VALUE ORIENTATION**

A multi-site experimental study in Belgium, Germany and the Netherlands

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ABSTRACT

Bribery is a critical and unresolved issue in the public sector. It is a complex phenomenon rooted in both individual motives and the greater institutional context. Consequently, experimental research into causal mechanisms that drive bribing behavior is still scarce. So far, there is no empirical evidence on how public service motivation (PSM) and social value orientation (SVO) can help explain why some people are more susceptible to bribing than others. Experimental evidence from Belgium, Germany, and the Netherlands shows that people with higher levels of PSM are less likely to accept the use of bribery. These results advance both the discourse on PSM and bribery by unraveling the complex interplay of prosocial attitudes, motivations, and the role of the macro-context in priming peoples' attitudes toward bribery. Furthermore, using a multi-site triple-replication vignette-experimental setup this unique research design advances the methodological toolset for future behavioral studies on PSM and corruption.

Keywords: Corruption, Bribery, Public Service Motivation, Social Value Orientation, Multi-site design.

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Corruption is still a wicked problem that does not seem to go away in many countries – if not any country – across the world. Corruption comes with very high social costs, due to the inefficient use of taxpayers' money and the undermining of the community's sense of fairness. The human right to be equally treated is violated, as only citizens with sufficient means gain disproportionately easy access to the services provided by public institutions (Gupta, 2002; Graycar, 2013; Zhang and Lavena, 2015; Javor and Jancsics, 2016; Liu et al., 2017). Corruption has macro and micro-level roots. On the one hand, a macro lens is required to explain differences in average corruption rates across countries. Clearly, a society's institutional context matters (Montinola and Jackman, 2002). On the other hand, a micro perspective is needed to understand individual variation within countries, as not all people act equally corrupt within the same institutional environment (Navot et al., 2016). In the scientific discourse, the macro and micro perspectives live, by and large, separate lives in different disciplinary silos. For example, in sociology, the importance of the institutional context for explaining corruption is emphasized; in contrast, in psychology, individual characteristics are examined as the key drivers of corrupt behavior.

The primary aim of this study is to contribute to the micro lens in a little series of three country studies examining whether individual attitudes and motivations can help explain why some people are more likely to engage in corruption than others (Kwon, 2012). Specifically, the current study reports findings of a between-subject randomized vignettes experiment regarding bribery in universities in Belgium ($n=220$), Germany ($n=211$), and the Netherlands ($n=193$), adding a complementary questionnaire to measure one of the key constructs in Public Administration that is argued to be an important micro-determinant of corruption: Public

Service Motivation (PSM). The three treatments involve vignettes that differ in the seriousness of the bribery act in a social service setting in order to include sufficient contextual variation.

So, in all, this paper presents findings from three studies, replicating a novel experiment in three countries, examining the impact of PSM on the likelihood to bribe. Two aspects of the research design are worth emphasizing in advance. First, this study compares three countries that vary little in the macro incidence of corruption: Belgium, Germany, and the Netherlands. This results in a multi-site research design with three sites sufficiently alike to conduct replications without dominant contextual noise that would threaten comparability (Walker et al., 2017). This macro perspective is reflected upon in the discussion section, offering a limited discussion of a few cross-country differences to explore post hoc the micro lens.

Secondly, this study not only measures PSM, but also Social Value Orientation (SVO). This approach contributes to unraveling the relative importance of the two affective (compassion and self-sacrifice) and the two non-affective (attraction to policy-making and commitment to the public interest) dimensions of PSM (Esteve et al., 2016), arguing that the non-affective dimensions can be expected to have a larger influence on bribery than their affective counterparts. Moreover, because SVO does not refer to the abstract notion of the public sector or the state, it is argued that SVO is more akin to the affective dimensions of PSM than to the non-affective ones.

The research design of this study comes with a few crucial methodological advantages. First, this research employs an experimental method following pleas of van Witteloostuijn (2015) and Walker et al. (2017). Although not central to the current paper, this offers the opportunity to identify treatment-related causal mechanisms. Second, in line with Landman (2008) and Guy (2011), this study conducts a comparative multi-country study allowing the analysis of difference and similarities across settings. Third, by running the experiment in three countries, this research responds to the recent appeals of van Witteloostuijn (2016) and Walker

et al. (2017) to conduct replication studies. This approach allows us to reflect on the generalizability of the findings, including a discussion of the boundary conditions of our theory.

THEORY

Corruption and Bribery

Corruption is a multi-faceted and many-faced phenomenon. Heidenheimer (2009, 150) distinguishes three *shades* of corruption: Black corruption, grey corruption, and white corruption. Black corruption is a particular action that by majority consensus of public opinion should be condemned and punished on grounds of principle. Grey corruption implies that limited elements, usually elites, may want to see the actions punished and that the majority may well be ambiguous. White corruption is tolerated by the majority of both elite and mass opinion and attempts to punish this form of corruption are not likely to find public support (Heidenheimer, 2009). The scientific discourse also distinguishes between different *acts* of corruption, examples being bribery and rule-breaking (Morrison, 2006; Heidenheimer, 2009). Within the scope of this article, the focus lies on bribery. According to Ramdani (2014, 1), bribery in the public sector is defined as ‘the corrupt payment, receipt, or solicitation of a private favor for actions or decisions from influential or powerful agents or authorities which could be public officials, corporations or people inside corporations to generate private benefits of the briber.’ Cultural and institutional differences across countries and regions play an important role in determining the incidence of bribery (Martin et al., 2007). For instance, bribery is usually found to be high in countries with limited political competition and low GDP/capita (Montinola and Jackman, 2002).

However, the likelihood of public sector bribery cannot be explained exclusively by referring to the cultural or institutional macro environment. Prior research by Martin et al. (2007), Jávora (2016), and Ramdani and van Witteloostuijn (2010; 2012) demonstrates the

critical importance of individual micro attributes. Individual characteristics such as age, gender and education, but also personal risk preferences are argued to have an effect on the likelihood that an individual person will offer and / or accept bribes (Alatas et al., 2009; Nichols, 2017). In this context, the potential effect of a key construct in Public Administration – Public Service Motivation (PSM) – has not been examined in great detail, to date. Yet, PSM is argued to be a critical determinant guiding behavior in the public sector (Esteve et al., 2015; Kim and Kim, 2016). As a starting point, the following section theorizes how PSM might impact the likelihood that an individual will engage in the act of bribing.

Overall Public Service Motivation

Public Service Motivation (PSM) is one of the most prominent concepts of the current scientific discourse with strong roots in both Public Administration and Public Management research. As one of the pioneers of the PSM concept, Perry (1996, 6) describes PSM as ‘an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions.’ PSM originally consists of six motives: Civic duty, social justice, commitment to the public interest, self-sacrifice, compassion, and attraction to public interest (Perry, 1996). The concept of PSM has evolved greatly over time, with much scholarship examining PSM's antecedents, definitions, consequences, and measures (Bozeman and Xu, 2015). For instance, Coursey and Pandey (2007), Vandenabeele (2008), Kim (2009), and Esteve et al. (2016) consolidated PSM, shaping its current and most widely used four-dimensional form, comprising attraction to policy-making (APM), commitment to public interest (CPI), compassion (COM), and self-sacrifice (SS).

The potential link between PSM and bribery has been referred to in conceptual, normative and theoretical terms. However, to date, a detailed empirical study is yet to be conducted (Kim and Kim, 2016). From a theoretical perspective, the argument is very

straightforward and highly intuitive. After all, by the very definition of the construct, the expectation is that high-PSM people prioritize serving the public interest, even to the extent of sacrificing their own self-interest. This motive strongly goes against any form of corruption, including the act of bribery, which involves serving self-interest at the expense of the public's. Indeed, it has been argued that people scoring high on PSM, on average, are more sensitive to unfair competition and oppose unethical behavior, of which bribery is a clear example (Kwon, 2012; Kim and Kim, 2016; Wright et al., 2016).

HYPOTHESIS 1 (H1): The relationship between PSM and the likelihood to accept bribery is negative, implying that the likelihood of accepting bribery decreases with an individual's overall PSM.

Non-Affective versus Affective PSM

Yet, this straightforward logic may be too simple, as PSM is a multi-dimensional construct. This implies that the potential effects of the different PSM dimensions might differ in strength. On the one hand, the non-affective (i.e., normative and rational) dimensions of PSM that relate to the public interest or the state in general – APM and CPI – can be argued to be strongly and negatively related to bribery for the reasons explained above: These dimensions aim to capture a proactive motivation regarding, and a positive perception of the public sector and the state (Perry, 1996). People scoring high on these two dimensions of PSM are (implicitly) assumed to have a relatively positive image of the public sector. Hence, they can be expected to be more resilient toward bribery, because acts of bribery threaten to harm the functionality of the public system that they actually feel attracted to (Kwon, 2012).

On the other hand, the two other dimensions of PSM – COM and SS – refer to more affective and intrinsic individual characteristics that foster altruism. According to Houston

(2006), Esteve et al. (2015; 2017), and van Witteloostuijn et al. (2016) these dimensions align with general psychological concepts such as altruism and pro-social behavior. Carefully inspecting the relevant items of the PSM scale indeed reveals that both affective dimensions refer to caring about other people, rather than to the more abstract notions of the public sector and the state. If public servants are being employed in a context in which they score high on these affective PSM dimensions, they might be more emotionally attached with individuals, instead of being affectively committed to the public sector or the state as a whole (Meyer and Allen, 1991). This may imply that the effect of both affective dimensions of PSM on the likelihood of bribery is not as strong as that of both non-affective counterparts.

HYPOTHESIS 2a (H2a): The relationships between the sub-dimensions of PSM and the likelihood to accept bribery are negative, implying that the likelihood of accepting bribery decreases with an individual's APM, CPI, COM, and SS.

HYPOTHESIS 2b (H2b): The negative relationship between PSM's APM and CPI and the likelihood to accept bribery is stronger than that between PSM's COM and SS and the likelihood of accepting bribery.

Social Value Orientation

One concept that can help to further identify the underlying mechanisms that may drive the effect of the non-affective vis-à-vis affective PSM dimensions on bribery is Social Value Orientation (SVO), a model of human motivation originally from psychology. Traditional normative theories of behavior assume that people are mainly motivated by self-interest (von Neumann and Morgenstern, 1947; Luce and Howard, 1957). Yet, subsequent theoretical advancements indicate that individuals systematically differ in the manner in which they interact with independent others (Kuhlman and Marshello, 1975; Van Lange, 1994). For

instance, Bogaert et al. (2008) and Balliet et al. (2009) show that this systematic divergence from pure self-serving behavior is related to individuals' SVO. This concept, according to Messick and Mcclintock (1968), refers to a stable preference for certain outcomes for oneself against others' outcomes, thus capturing the extent to which an individual is mainly concerned with personal versus group (or pro-self vis-à-vis pro-social) well-being. On the one hand, pro-self people work toward the realization of their personal goals with little or no regard to other peoples' goals, whereas their pro-social counterparts also consider the goals of others, attaching more importance to the well-being of the group.

SVO is strongly related with pro-social behavior. According to Batson and Powell (2003), pro-social behavior covers a wide range of actions intended to benefit one or more people other than oneself, such as helping, comforting, sharing and cooperating. These behaviors can benefit coworkers, customers, teams, stakeholders, or the organization as a whole (Bolino and Grant, 2016). Pro-social behavior is positively linked with individual organizational outcomes such as job performance, organizational commitment, and career success. Based on processes of reciprocity, such behavior creates strong and weak ties, leading to the construction of social capital (Bolino et al., 1999; Shah et al., 2015). Furthermore, pro-social individuals are perceived as being less threatening to others, which makes them valued allies instead of competitors (Casciaro and Lobo, 2008). De Cremer and Van Lange (2001), in line with earlier research by Sattler and Kerr (1991), argue that high-SVO people reveal a greater concern for others and for the group, and that they judge more in terms of values such as fairness, honesty and equality.

The above logic has three implications relevant in the context of PSM and bribery, which together provide further underpinning of the complex relationship between PSM's affective vis-à-vis non-effective dimensions and bribery. First, pro-self individuals will be more likely to accept bribery than their pro-social counterparts, given that the very definition of

bribery implies an act of self-interest. Hence, SVO is expected, as is overall PSM's, to negatively affect the likelihood of accepting bribery. However, second, SVO does not refer to the abstract notions of the public sector or the state. Rather, SVO involves regard for other people. This implies that SVO is more akin to COM and SS, and much less so to APM and CPI. Third, taking all arguments together, overall SVO can be expected to correlate less strongly with the likelihood of accepting bribery than overall PSM, as the latter contrary to the former does include references to the public sector and the state.

HYPOTHESIS 3a (H3a): The relationship between SVO and the likelihood to accept bribery is negative, implying that the likelihood of accepting bribery decreases with an individual's SVO.

HYPOTHESIS 3b (H3b): The relationship between SVO and PSM's affective dimensions of COM and SS are positive, implying that the impact of PSM's affective dimensions increases with an individual's SVO.

HYPOTHESIS 3c (H3c): The positive relationship between SVO and PSM's affective dimensions COM and SS are stronger than those between SVO and PSM's non-affective dimensions of APM and CPI.

HYPOTHESIS 3d (H3d): The negative relationship between overall PSM and the likelihood to accept bribery is stronger than the negative relationship between SVO and the likelihood of accepting bribery.

METHODS

Multi-national Multi-site Vignettes Experiment

An original multi-site vignettes experiment was conducted as an online survey with three independent country samples from April to August 2017. This experiment was programmed

and hosted with Qualtrics' software, and distributed via e-mail invitation among students of four university faculties in Belgium, Germany and the Netherlands, across a variety of economic and social sciences, ranging from public and for-profit management, to political sciences, socio-economic studies and business engineering. Participation was voluntary. In each country, students were incentivized with the possibility of winning one of four significant (1 x €250, 1 x €150, and 2 x €50) gift certificates for a well-known online retailer. The English survey was translated into Dutch (for both Belgium and the Netherlands) and German, and slightly adapted to the local context to accommodate the specific national conditions of higher education. The dataset was strictly pre-stratified for missing and repetitive responses, and comprises only complete non-skewed responses. In the prospect of small effect sizes (Cohen's $d \leq |0.3|$; power=0.8; $\alpha=0.05$), conservative estimates prior to data collection indicate that the necessary absolute sample size requires $n=176$ respondents per study (Ellis, 2010). This has been achieved.

Vignettes are stimuli in the form of narrative scenarios in which participants are invited to imagine that they have to act in the vignette's context, and respond accordingly to a series of survey items (Hughes and Huby, 2004). Vignettes are proven to be very useful instruments in experiments with the power to systematically manipulate and trigger context-dependent behavior at high degrees of both internal and external validity (Aguines and Bradley, 2014). The experiment (see Appendix A.1 for full setup and vignettes) is composed of four parts: A short introduction, a socio-demographic questionnaire with control variables (age, gender, religious beliefs, nationality, and field of study), and standardized measures of PSM, SVO (our key independent variables), and risk attitude (an additional control variable).

Following Esteve et al. (2015; 2016), PSM was measured with Kim's (2011) 12-item Likert-type scale in its four-dimensional conceptualization. The scale items were translated with a double-blind back-translation procedure to maximize reliability. Items must be scored from 1

= ‘absolutely disagree’ to 7 = ‘absolutely agree’. SVO was measured with Bogaert et al.’s (2012) validated procedure (Appendix A.3). Respondents have to make decisions over a total of nine scenarios based on the classic Dictator Game setup, in which they decide about what proportion of a hypothetical reward of, on average, €500 they are willing to share with another anonymous person. Each scenario offered three systematically varied choice options that are each characteristic for either a competitive choice (e.g., €480 for self and €80 for other), individualistic choice (e.g., €540 for self and €280 for other), or pro-social choice (e.g., €480 for self and €480 for other) (Kuhlman and Marshello, 1975; Bogaert et al., 2012). Counting the number of pro-social choices, this measure results in a compound ranking score ranging from 0 to 9 for each participant, in which higher scores indicate higher SVO. Participants’ risk attitude was assessed with Madden et al.’s (2009) Probability Discounting Questionnaire, a measure that estimates revealed behavior under risk based on responses to a systematic and randomized set of economic trade-off tasks (see Table A.2 for the full item list). Compared with stated preferences, revealed behavior is a more reliable indicator for people’s actual behavior outside the study context. Because the data is dominated by risk-averse individuals, data were centralized by taking the logarithm of the risk parameter estimation results. Since higher discounting parameters indicate stronger probability discounting, individuals with $\ln(h) > 0$ are characterized as risk averse.

Subsequently, respondents were randomly assigned to two out of three bribery vignettes, which were designed with due diligence following Hughes and Huby (2004). Treatment randomization is an essential requirement for experimental research seeking to infer causal relations (Jilke and Van Ryzin, 2017). The balance between treatment groups was strictly controlled for, with success (see Table 1). The vignettes were designed to represent Ramdani and van Witteloostuijn's (2014) three shades of corruption, ranging from white to grey and to black forms of bribery. They comprise scenarios in which respondents were in the active role

of a student proposing a bribery offer to a professor in exchange of reconsideration of an important exam score. The external validity of this approach was corroborated with an expert panel, as suggested by (Gould, 1996). Furthermore, adequate pretests with students were conducted (Wilson and While, 1998).

Dependent Variable: Acceptability of Bribing

We developed a novel measure for respondents' perceived *acceptability of bribing* (AoB), which serves as our main dependent variable. After each vignette treatment, respondents were asked to indicate how they would react in this specific scenario by answering four Likert-type items ranging from 1 = 'absolutely disagree' to 5 = 'absolutely agree'. These four items were designed to load onto respondents' attitudes regarding acting corrupt – i.e., bribing the professor in the respective scenarios – by asking how likely they were to bribe in this context (*likelihood*), how justified offering the bribe was (*justification*), how comfortable they would feel in doing so (*affect*), and whether offering a bribe would be a mistake (*mistake*), which was a reverse item for control. These four items are sum-scored to form AoB. The validity of this aggregation procedure was tested with confirmatory factor analysis (varimax rotated with Kaiser normalization for item correlation), which confirmed high internal validity and robustness against country effects when repeated separately for each of the three studies (see Appendix A.4). The resulting dependent variable is normally distributed across all treatment conditions [tested with Shapiro-Wilk; vignette 1: $W(409)=0.991$, $p=0.015$; vignette 2: $W(417)=0.954$, $p=0.000$; vignette 3: $W(415)=0.892$, $p=.000$], and thus allows for regression analysis. As a control variable, respondents were asked to rate how realistic they found the scenario on a four-point Likert-type single item, ranging from 1 = 'very unrealistic' to 4 = 'very realistic'.

Model Estimation

Because study participants always responded to two vignettes, linear regression analysis was conducted with heteroscedasticity-robust standard errors clustered at the subject level. The dependent variable is perceived AoB, and the model as follows:

$$AoB = \beta_1 PSM (total) + \beta_5 SVO + \beta_6 Risk\ Aversion + \beta_7 Age + \beta_8 Female + \beta_9 Grey\ Bribery + \beta_{10} Black\ Bribery + \beta_{11} Realism + \varepsilon$$

Subsequently, analysis differentiates between the four classical dimensions of PSM and includes APM, CPI, COM, and SS separately in the model, followed by SVO and individuals' revealed risk propensity, as well as their age and gender as control variables. White bribery serves as a reference category, followed by a binary indicator for high perceived realism of the treatment condition to guarantee high ecological validity of the model.

FINDINGS

Study 1

Study 1 is conducted at a Belgian university. The average time to completion is 13.6 minutes. The sample comprises $n=220$ respondents, which are slightly dominated by female participants (51.8%), on average 22.5 (± 3.7) years old, predominantly nonreligious (49.6%), and study a variety of business and social sciences, especially Business Administration (46.8%) (see Table 1 for more detail). Respondents score relatively high on PSM ($M=5.53$, $SD=0.85$), especially on the dimensions of APM ($M=5.94$, $SD=1.14$) and CPI ($M=5.72$, $SD=1.03$), and reveal high

SVO ($M=6.51$, $SD=3.57$). Responses on the probability discounting task indicate high risk aversion ($M=1.57$, $SD=0.65$).

[Insert Table 1 about here]

Across all treatments, respondents score below the scale's medium on AoB ($M=1.866$, $SD=0.914$). Two-tailed t-testing shows that the vignettes create significant variance, with AoB strictly decreasing from the white ($M=2.65$, $SD=0.87$) to the black bribery scenario ($M=1.31$, $SD=0.53$), indicating a strong and robust treatment effect [$t(287)=-15.781$, $p=0.000$, $d=-1.863$]. Pair-wise correlation analysis of the dependent variable by bribery vignette indicates high internal discriminant validity with very small inter-item covariance (0.067) and high construct validity of the dependent variable items (Cronbach's $\alpha = 0.60$), which confirms that the three different vignettes trigger the same underlying concept.

Overall PSM is negatively related to AoB (see Table 2: $\beta_1 = -0.031$, $p=0.469$), but this effect is only marginally or not statistically significant, providing weak support for H1, at best. The negative effect of SVO on AoB is significant ($\beta_2 = -0.022$, $p=0.035$), providing support for H3a. Pairwise correlation analysis between the four dimensions of PSM and SVO is in line with H3b, but not with H3c, revealing that SVO is positively and significantly correlated with all four dimensions (all $p < 0.000$), but Pearson's r is significantly smaller for APM ($r = 0.186$) than for the dimensions CPI ($r=0.331$), COM ($r=0.275$), and SS ($r=0.331$).

[Insert Table 2 about here]

Linear regression analysis with separate dimensions of PSM and robust standard errors clustered at the individual level (see *Study 1* in Table 3) reveals that both COM ($\beta_3=-0.081$, $p=0.025$) and SVO ($\beta_5=-0.022$, $p=0.032$) are significantly negatively related with AoB. Hence, high-COM and high-SVO people are less likely to engage in bribery, which offers further support for H3a, but is not in line with H2a and H2b. The coefficient for overall PSM is substantially larger than that for SVO, which is in accordance with H3d. The relatively large negative coefficient of risk aversion ($\beta_6=-0.238$) indicates that highly risk-averse individuals are less likely to bribe, which is in accordance with our expectations, but the estimation is not statistically significant ($p=0.446$). Estimates reveal that women are far less likely to bribe ($\beta_8=-0.191$, $p=0.007$), that AoB strictly and transitively decreases with darkening shades of bribery (black against white: $\beta_{10}=-0.212$, $p=0.023$), and that respondents are much more likely to bribe if they perceive the treatment scenario as realistic ($\beta_{11}=1.022$, $p=0.000$). The model is well specified [$F(11, 432)=24.76$, $p=0.000$] and, in the context of an experiment in the social sciences, explains a large share of variance ($R^2=36.6\%$). A mean VIF=1.35 indicates that multicollinearity is not an issue (VIF range: 1.05–1.88).

[Insert Table 3 about here]

Study 2

Respondents of study 2 are $n=211$ students in economic and social sciences, especially Public Administration ($n=38$) and Business Administration ($n=37$), at a large university in Germany. Respondents were, on average, 25.8 (± 4.8) years old, and predominately female (54.8%) and non-religious (40.8%). Respondents report high PSM ($M=5.26$, $SD=0.98$), with relative high scores in COM ($M=5.61$, $SD=1.14$) and relative low scores in SS ($M=4.73$, $SD=1.19$). On the 9-point SVO scale, a mean value of 4.83 (± 2.93) is just slightly above average. This sample's response on the discounting task reveals a small to moderate degree of risk aversion ($M=0.65$, $SD=0.62$). The average time to completion the experiment is 15.6 minutes. Across all treatment conditions, respondents score relatively lower than average on LoB ($M=2.054$, $SD=0.968$). Two-tailed t-testing analysis indicates that the three vignettes created sufficient variance in the bribery treatment. Respondents' LoB decreases strictly and transitively the darker the shade of bribery from white ($M=2.65$, $SD=0.95$) to black bribery ($M=1.60$, $SD=0.79$), which indicates a strong and robust treatment effect [$t(284)=-10.076$, $p=0.000$, $d=-1.200$]. Pairwise correlation analysis indicates high internal discriminant validity of the three treatment scenarios (inter-item covariance = 0.057) and satisfactory construct validity (Cronbach's alpha = 0.45).

Robust linear regression modelling with overall PSM (see *Study 2* in Table 2) is weakly in line with H1, since the effect of PSM on AoB is negative ($\beta_1=-0.048$), but is not statistically significant ($p=0.360$). Similarly, in accordance with H3a, the effect of SVO is negative (table 2: $\beta_2=-0.012$), but not significant ($p=0.509$). H3d receives support, as PSM's coefficient is substantially larger than SVO's. Pairwise correlation analysis between the four dimensions of PSM and SVO supports H3b, but not H3c, revealing that SVO is significantly positive and equally strongly correlated with all four dimensions (CPI: $r=0.321$; APM: $r=0.293$; COM: $r=0.314$; SS: 0.338; all $p<0.000$).

Results of the clustered robust linear regression analysis with separate dimensions of PSM show that, for this sample (*Study 2* in Table 3), CPI has a significant and strong negative effect on AoB ($\beta_2 = -0.142$, $p = 0.015$), supporting H2a for CPI, and H2b, and reveals a positive relationship between COM and bribery, which goes against H2a for COM, but only on the 90%-level of confidence ($\beta_3 = 0.104$, $p = 0.064$). The negative effect of CPI on AoB and the positive effect of COM on AoB support H2b. Results indicate that people with high SVO are more likely to accept bribe ($\beta_5 = -0.013$), in line with H3a, but not significantly so ($p = 0.448$). Moreover, risk-averse ($\beta_6 = -0.331$, $p = 0.056$) and female respondents ($\beta_8 = -0.185$, $p = 0.064$) are all less likely to accept bribing, but these findings are not robust at the 95%-level of confidence. Respondents were significantly more likely to accept bribery if they received their treatment scenarios as more realistic ($\beta_{11} = 0.921$, $p = 0.000$). The model explains considerable variance ($R^2 = 25.6\%$) and is well specified [$F(11, 423) = 12.15$, $p = 0.000$]. VIF values range from 1.06 to 2.08, indicating that multicollinearity is not an issue (mean VIF = 1.42).

Study 3

The data for study 3 were collected at two different universities in the Netherlands. The sample ($n = 193$) is slightly dominated by female (51.8%) and non-religious (67.7%), with an average age of 21.1 (± 2.8) years. Respondents are mostly students of Business Administration (36.1%) or Socioeconomics and (31.3%). Respondents score relatively high on the compound PSM scale ($M = 5.38$, $SD = 0.92$), especially high on APM ($M = 5.86$, $SD = 1.06$) and relatively low but still clearly above average on SS ($M = 5.01$, $SD = 1.36$). Respondents reveal high SVO ($M = 6.11$, $SD = 3.76$) and a medium degree of risk aversion ($M = 0.96$, $SD = 0.61$). The average time to completion of the experiment is 13.7 minutes. Over all treatments, respondents score medium high on AoB ($M = 1.944$, $SD = 0.962$). Participants' response on AoB decrease strictly and transitively from the white ($M = 2.69$, $SD = 0.90$) to the black bribery treatment ($M = 1.39$,

SD=0.66), indicating a strong and robust treatment effect [$t(255)=-13.088$, $p=0.000$, $d=-1.639$]. Pairwise correlation analysis shows that the three treatment conditions have high internal discriminant validity (inter-item covariance = 0.090) and high construct validity (Cronbach's alpha = 0.61).

Robust linear regression model estimates with overall PSM on AoB (see *Study 3* in Table 2) are in line with H1, as high PSM has a negative effect on AoB ($\beta_1=-0.068$), but insignificantly so ($p=0.206$). Estimates merely hint at a negative relation between SVO and AoB ($\beta_2=-0.011$), in accordance with H3a, but again insignificantly so ($p=0.429$). In line with H3d, PSM's estimate is substantially larger than SVO's. Pairwise correlation analysis between the four dimensions of PSM and SVO are in line with H3b, but not with H3c, revealing that SVO is significantly and strongly correlated with overall PSM, but the Pearson r 's are only significant ($p<0.000$) for the three dimensions of CPI ($r=0.314$), COM($r=0.422$), and SS ($r=0.446$), but not for APM ($r=0.013$).

Robust clustered regression modelling with the separate dimensions of PSM does not reveal robust relationships of any of the four PSM dimensions or SVO with AoB (see *Study 3* in Table 3 for more detail), failing to provide support for H2a, H2b, H3a and H3d. The contribution of risk aversion to the model estimation is relatively strong ($\beta_6=0.363$, $p=0.099$), but this effect is only significant at the 90%-level of confidence. Furthermore, the Dutch sample does not significantly differentiate between different shades of bribery (grey bribery: $\beta_9=-0.089$, $p=0.393$; black bribery: $\beta_{10}=-0.075$, $p=0.455$). In contrast, the effect of perceived realism of the treatment is very influential in this study, showing that respondents are much more likely to accept the use of bribes if they perceive the situation as realistic ($\beta_{11}=1.158$, $p=0.000$). The model is well specified [$F(11, 386)=19.01$, $p=0.000$], and explains a large percentage of variance ($R^2=35.9\%$), and multicollinearity is not an issue (mean VIF=1.43; VIF ranges from 1.08-1.95).

Pooled Analysis

By way of post hoc analysis, the three country-specific data sets were pooled to a total sample of $n=1,242$. The larger n implies that the hypotheses can be tested with greater power. Robust linear regression estimation of AoB including overall PSM (see *Pooled Study* in Table 2) further shows that the relationship of PSM and AoB is negative ($\beta_1=-0.054$) and significant ($p=0.056$), the latter probably due to increased power, which gives overall support for H1. The effect of SVO on AoB is negative ($\beta_1=-0.017$) and statistically ($p=0.032$), in line with H3a. In accordance with H3d, the coefficient of PSM is substantially larger than that of SVO. Regarding the dimensions of PSM, results give evidence that supports H3b, but largely goes against H3c since SVO is significantly (all $p<0.000$) correlated with all four dimensions, but more strongly so with CPI ($r=0.321$), COM ($r=0.322$), and SS ($r=0.393$) than with APM ($r=0.193$). Robust regression with all four PSM dimensions (see *Pooled study* in Table 3) does produce the following set of results: (i) a negative effect of APM ($\beta_1= -0.015$,) and COM ($\beta_3=-0.012$), both being far from significant ($p=0.696$ and $p=0.627$, respectively); (ii) a negative effect of CPI ($\beta_2=-0.057$) that is significant ($p=0.023$); and (iii) a weak positive effect of SS ($\beta_4=0.021$) that is insignificant ($p=0.361$). This set of findings largely goes against H2a and H2b.

DISCUSSION

Table 4 summarizes all findings, suggesting the conceptual model visualized in Figure 1. Below, the pattern in findings is interpreted in line with the guidelines of Meyer et al. (2017). In their editorial letter in the *Journal of International Business Studies*, they argue that a blind focus on p-value thresholds is misguided: Not only is any p-value threshold arbitrary, but also are effect sizes more important. Moreover, reporting findings of the three replication studies (plus pooled analyses) allows for sign (inconsistency) inspection of the estimates.

[Insert Table 4 about here]

First, the findings confirm that PSM has a direct negative effect on peoples' acceptability to bribe. This effect is sign consistent across all three study replications, but only statistically significant in the pooled data. Second, CPI has a significant and consistently negative effect, whilst SS has a consistently positive effect. This might explain the relatively weak finding for overall PSM, as this implies opposing dimensional effects that push the aggregate PSM effect below the traditional p-value threshold. Moreover, SVO's impact is consistently negative, too, but with a consistently smaller effect size vis-à-vis overall PSM. Additionally, SVO is positively and significantly related with each of the four dimensions of PSM, and especially strongly so with CPI and SS.

[Insert Figure 1 about here]

Overall, our findings are in line with the hypotheses regarding the overall constructs of PSM and SVO, but not with the ones with respect to the subtle underlying dimensional

relationships. Specifically, (1) the effects of APM and COM on the acceptability of bribery are not sign-consistent across countries, (2) the consistently positive impact of SS on bribery acceptance goes against our expectation, and (3) the results for AMP and CPI (both in terms of their effect on the acceptability of bribery and the correlations with SVO) are not consistently stronger than those for COM and SS. One part of the explanation might be that our sample of university students lacks the work experience needed to really relate to the APM and CPI dimensions. Future research with non-student samples is required to explore this potential explanation. Another possible argument involves the very nature of the PSM construct (see, e.g., Esteve et al., 2016) and / or the imprecision or incompleteness of our 12-item measure (Vandenabeele, 2008). These subtle issues regarding the conceptualization and measurement of PSM are beyond the scope of the current study, but clearly imply that further studies are needed to shed light on these issues.

The three replicative studies were conducted in three West-European countries in which corruption is perceived as relatively low (Transparency International, 2017), implying that the institutional environment is unlikely to be a distinctive factor. Yet, the analysis does reveal small but significant differences between samples. For instance, respondents from Germany (Study 2) in contrast to respondents from Belgium (Study 1) tend to be more likely to accept bribes when being more compassionate. This relates to research by Montinola and Jackman (2002) and Achim (2016), pointing out that the factors that stimulate corruption can well be located at the greater macro-level. Institutional environments frame individual behavior by shaping expectations, attitudes, and norms that are learned through socialization processes (Morgan, 2009), and which are very specific to country cultures. Taking Hofstede's (1980) classical set of cultural dimensions, Germany scores relatively low on *indulgence* compared with Belgium and the Netherlands, which are very similar in this respect (Hofstede and McCrae, 2004). Individuals socialized in cultures with low levels of indulgence are normally restrained

by strict social norms and have a stronger tendency of responding to incentives to break these rules, which might manifest in monetary but also emotional bribes (Achim, 2016). This might explain why Germans highly driven by compassion are triggered to act more pro-social when being confronted with pro-self behavior as a way of engaging with the person in need by showing generosity and, thus, to compensate for the generally high level of restriction by breaking the rules. In our context, this may translate into a higher willingness to accept bribery among our German sample.

In contrast, Belgian students who feel very compassionate are more reluctant to accept the use of bribery. One reason could be that, as reported by Hofstede and McCrae (2004), Belgians score exceptionally high on *uncertainty avoidance*, being very different from Germany and the Netherlands in this regard. As shown by a large survey-based study by Seleim and Bontis (2009), corruption is far less likely to occur in countries with high uncertainty avoidance. People in these countries feel uncomfortable with the uncertainty and ambiguity that comes with the illicit act of bribery. In this sense, compassion seems to function as a moderator that triggers an emotional rationalization process from which Belgians – in contrast to Germans – deduct that they should not let themselves be moved by their compassion, thus reducing their likelihood to accept bribery.

Furthermore, respondents are more likely to accept the use of bribery if they perceive the vignette treatment as more realistic. This is a striking finding, contradicting extant theory in at least two ways. First, despite its great potential, experimental vignettes research has often been criticized for its limited external validity on the argument that vignettes studies are too abstract. Hence, such studies might not capture actual behavioral intent under real-life conditions (Bouwman and Grimmelikhuijsen, 2016). Second, respondents would be expected to be more willing to demonstrate socially acceptable behavior in a realistic setting, implying a lower likelihood of accepting bribery since bribery is subject to stigmatization, certainly in our

set of three Western-European countries (Tourangeau and Yan, 2007). Empirical evidence regarding honesty in questionnaire responses by Hughes and Huby (2004) and Kreuter et al. (2008) imply that realism in vignette treatments can have a moderating effect on the social desirability response bias, but only if the treatment scenarios are directly related to respondents' own experiences. Consequently, the realism finding can be interpreted as evidence that well-conducted and thoroughly pre-tested vignettes can be of substantial value for behavioral experimental research that tries to tackle the essential and delicate issues in Public Administration.

Like any study, ours is subject to limitations. First, measuring respondents' context-dependent intention to bribe, this study does not examine real-world behavior, but reveals behavioral intent that might prime real-world behavior. Although the realism of vignettes were pretested and controlled for, further work is needed in the context of real-world behavior. Specifically, given the social desirability bias, the acceptability of bribery in this study might be underreported. Second, the study was conducted, by design, in three countries with similar levels of bribery and corruption. Nevertheless, our data reveal differences between countries that point toward a more complex interaction between the macro-institutional context and the micro-constructs of PSM (dimensions) and SVO. Given that even in a multi-site study in three countries selected for *not* being very different, interesting differences exist, which strongly call for the replication of this study in countries that *are* very different. Doing so will shed light on the impact of macro institutional variations on the likelihood of corruption, as well as on the interaction of macro and micro determinants of such behavior.

CONCLUSION

The motivation of this study was to explore the connection between bribery, PSM, and SVO. Using a multi-site replication approach, the results of this study not only show that PSM is

significantly related to bribery but also that SVO is an antecedent of PSM and that individuals with a higher orientation toward social values are less likely to accept the use of bribery.

The results of this study contribute to the broad discourse of both PSM and public sector corruption as it illustrates how relevant concepts such as PSM and SVO mutually interact and affect bribery. Furthermore, it comes with a few methodological advancements. First, the research design proved to be robust by replicating the study in three different countries. Second, the experimental design enabled us to find out to what extent bribery is contextually-dependent. Third, the vignettes and four-item measure that were developed within the scope of this research have been validated and can, thus, be used in future research.

Furthermore, the findings of this study are especially relevant for practice. Practitioners seeking to diminish the likelihood of bribery should prefer to employ people with high social value orientation, who are highly driven by pro-social motives and hold a high commitment to the public interest. However, human resource managers in the public sector should take into account that – depending on the greater cultural context – high compassion with others and a tendency to put others' goals first can also lead to more susceptibility to bribery. Furthermore, practitioners should keep an open eye on more subtle forms of bribery such as emotional pleading or offering a helping hand because people are much more susceptible to these 'white' and 'grey' forms of bribery than for the classic brown envelop.

We can identify a few avenues for future research. First, the study calls for further replication in order to find out to what extent the greater institutional context primes individual behavior. Second, this study only focused on pro-self-forms of corruption while the findings illustrated that there might be a connection with pro-social forms of corruption as well. Therefore, future studies might try to find out if PSM and SVO might also have an effect on pro-social behavior such as pro social rule-breaking.

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Table 1: Descriptive statistics

	Study 1	Study 2	Study 3
Sampling site	Belgium	Germany	The Netherlands
N	220	211	193
Treatment 1 (%) ^a	34.7	33.8	34.2
Treatment 2 (%) ^a	34.8	33.8	31.4
Treatment 3 (%) ^a	34.9	34.2	30.8
Gender, male (<i>n</i>) ^a	48.2% (104)	45.2% (95)	48.2% (93)
Age in years ^a	22.47±3.65	25.84±4.82	21.13±2.82
Nationality			
Belgian	89.1% (196)	.	.
German	.	88.6% (187)	3.1% (6)
Dutch	8.6% (19)	.	93.3% (180)
Other	2.3% (5)	11.4% (24)	3.6% (7)
Religion (<i>n</i>)			
Non-believer	49.6% (109)	40.8% (86)	67.7% (130)
Catholic	40.0% (88)	14.7% (31)	20.7% (40)
Protestant	2.3% (5)	33.7% (71)	6.7% (13)
Muslim	5.9% (13)	6.6% (14)	.5% (1)
Jewish	.5% (1)	.	.5% (1)
Buddhist	.5% (1)	.	1.6% (3)
Other	1.4% (1)	4.3% (9)	2.6% (5)
Field of study (<i>n</i>)			
Public Administration	.	19.7% (38)	1.4% (3)
Socioeconomics & Economic Policy	10.0% (22)	9.9% (19)	31.3% (66)
Political Sciences	7.3% (16)	3.6% (7)	5.7% (12)
Business Administration	46.8% (103)	19.2% (37)	36.1% (76)
Business Engineering	24.1% (53)	.	4.3% (9)
Other Social Sciences	11.8% (26)	47.7% (92)	21.3% (45)
PSM (total); M ± SD	5.53±.85	5.26±.98	5.38±.92
APM	5.94±1.14	5.47±1.32	5.86±1.06
CPI	5.72±1.03	5.52±1.13	5.39±1.15
COM	5.60±1.15	5.61±1.14	5.55±1.05
SS	5.18±1.17	4.73±1.19	5.01±1.36
Social Value Orientation (SVO); M ^a ± SD	6.51±3.57	4.83±2.93	6.11±3.76
Risk aversion (revealed) ^b	1.57±.65	.65±.62	.96±.61

Notes: Items are either reported with geometric means and standard deviations (M ± SD) or proportions (%) and frequencies (*n*); ^a treatment distribution checked for balance with two-tailed *t*-tests within and between studies; all non-significant; ^b logarithmic probability discounting parameter, centralized.

Table 2: Regression on AoB with SVO and the total score of PSM

	<i>Study 1</i>	<i>Study 2</i>	<i>Study 3</i>	<i>Pooled</i>
PSM	-.031 (.043)	-.048 (.052)	-.067 (.053)	-.054† (.028)
SVO	-.022* (.010)	-.012 (.018)	-.011 (.014)	-.017* (.008)
Risk aversion	-.023 (.053)	.092 (.077)	-.053 (.064)	-.010 (.033)
Age	.003 (.009)	.015† (.008)	-.002 (.010)	.011* (.006)
Female	-.223** (.070)	-.124 (.101)	-.122 (.091)	-.160** (.049)
“White bribery”	– reference category for bribery scenario –			
“Grey bribery”	-.132 (.088)	-.147 (.115)	-.144 (.101)	-.145* (.059)
“Black bribery”	-.236* (.092)	-.189 (.120)	-.076 (.103)	-.182** (.060)
High realism of treatment scenario	1.025*** (.086)	.888*** (.095)	1.167*** (.086)	1.011*** (.051)
Intercept	2.141*** (.316)	1.856*** (.367)	2.290*** (.322)	2.023*** (.206)
<i>Observations</i>	430	423	386	1,241
<i>F</i>	1.18	1.22	1.21	1.18
<i>VIF^a</i>	1.35	1.42	1.43	1.34
<i>R²</i>	.361	.237	.369	.316

Notes: Linear regression modelling clustered by respondent for conditional contribution, robust standard errors reported between parentheses; ^a Mean variance inflation factor (VIF), all VIF ≤ 2.08; † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 3: Regression on AoB with SVO and the separate PSM dimensions

	<i>Study 1</i>	<i>Study 2</i>	<i>Study 3</i>	<i>pooled</i>
PSM 1: APM	.016 (.034)	-.022 (.042)	-.034 (.051)	-.015 (.023)
PSM 2: CPI	-.010 (.038)	-.142* (.057)	-.019 (.046)	-.057* (.026)
PSM 3: COM	-.081* (.036)	.104† (.056)	-.013 (.050)	-.012 (.024)
PSM 4: SS	.034 (.010)	.019 (.044)	.004 (.041)	.021 (.008)
SVO	-.022* (.311)	-.013 (.017)	-.021 (.014)	-.018** (.008)
Risk aversion	-.238 (.010)	-.331† (.172)	.363† (.219)	-.289* (.130)
Age	.001 (.070)	.012 (.008)	.004 (.012)	.014* (.006)
Female	-.191** (.070)	-.185† (.099)	-.109 (.104)	-.164** (.051)
“White bribery”	– reference category for bribery scenario –			
“Grey bribery”	-.110 (.088)	-.110 (.112)	-.089 (.010)	-.123* (.060)
“Black bribery”	-.212* (.093)	-.102 (.121)	-.075 (.101)	-.141* (.060)
High realism of treatment scenario	1.022*** (.084)	.921*** (.095)	1.158*** (.088)	1.028*** (.052)
Intercept	1.944*** (.434)	1.629*** (.372)	2.457*** (.445)	1.710*** (.247)
<i>Observations</i>	432	423	386	1,241
<i>F</i>	24.76***	12.15***	19.01***	46.26***
<i>VIF^a</i>	1.35	1.42	1.43	1.34
<i>R²</i>	.366	.256	.359	.314

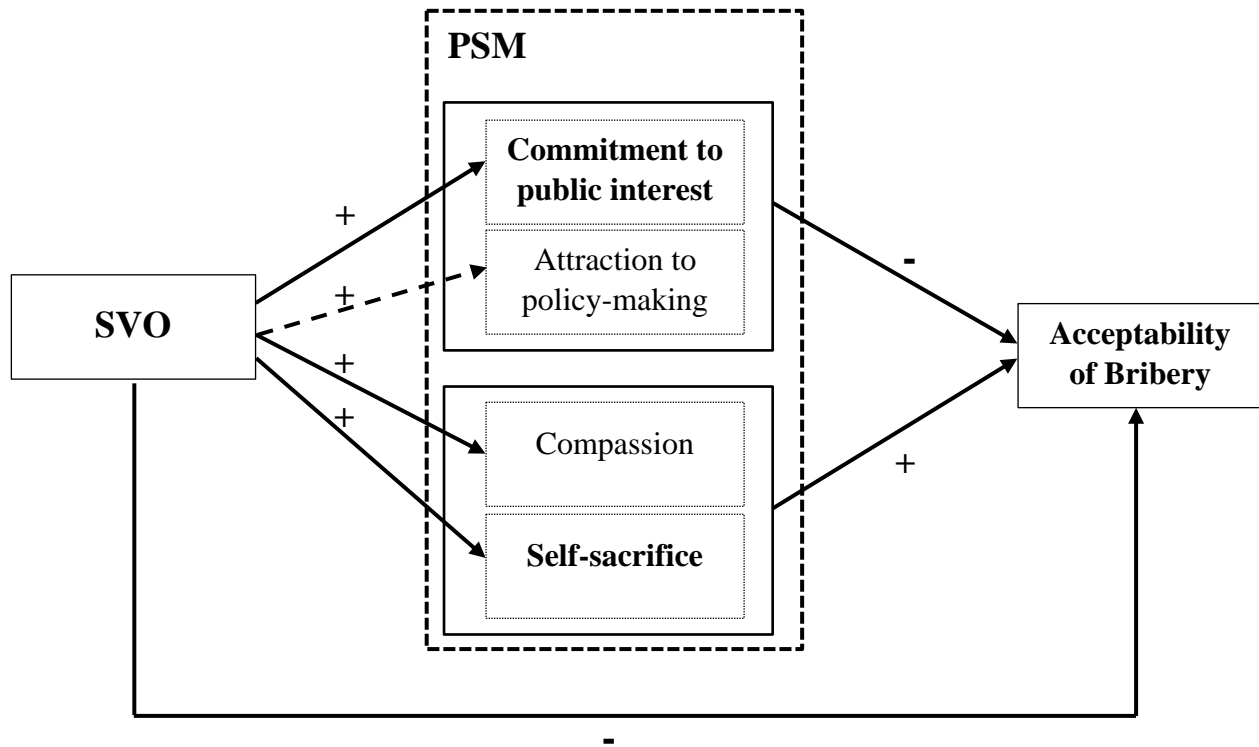
Notes: Linear regression modelling clustered by respondent for conditional contribution, robust standard errors reported between parentheses; ^a Mean variance inflation factor (VIF), all VIF ≤ 2.08; † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 4: Overview of findings

<i>Hypothesis</i>			<i>Study 1</i>	<i>Study 2</i>	<i>Study 3</i>	<i>Pooled Study</i>	<i>Interpretation</i>
H1 ^a	(-)	PSM → AoB	-.031	-.048	-.067	-.054† (.100)	Consistently negative
H2a ^a	(-)	APM → AoB	+.016	-.022	-.034	-.015	Mixed
	(-)	CPI → AoB	-.010	-.142* (.023)	-.019	-.057* (.028)	Consistently negative
	(-)	COM → AoB	-.081* (.037)	+.104† (.055)	-.013	-.012	Mixed
	(-)	SS → AoB	+.034	+.019	+.004	+.021	Consistently positive
H2b ^b		(APM & CPI) → AoB > (COM & SS) → AoB	.56 (.457)	5.19 (.023)*	.55 (.460)	2.41 (.121)	Mixed
H3a ^a	(-)	SVO → AoB	-.022 (.034)*	-.012	-.011	-.017 (.023)*	Consistently negative
H3b ^a	(+)	SVO → APM	.19	.29	.01	.19	Consistently positive
	(+)	SVO → CPI	.33	.32	.31	.31	Consistently positive
Additional analysis ^c	(+)	SVO → COM	.28	.31	.42	.42	Consistently positive
	(+)	SVO → SS	.33	.33	.45	.45	Consistently positive
H3c ^b		SVO → (COM & SS) > SVO → (APM & CPI)	.25 (.616)	.88 (.348)	39.89 (.000)***	13.11 (.000)***	Mixed
H3d ^b		PSM > SVO	.09 (.760)	.13 (.719)	.96 (.328)	1.44 (.231)	Consistently stronger
Additional analysis ^c	(+)	SVO → PSM	.40	.40	.42	.42	Consistently positive

Notes: ^a beta coefficient, with significant p-values between brackets († p < 0.10, * p < 0.05, ** < 0.01, *** < 0.001); ^b F-testing of regression analysis results (p-values between brackets) and close inspection of effect size differences; ^c Pearson's r (all correlations p < 0.000).

Figure 1: Conceptual framework after exploratory analysis



APPENDIX

A.1 Experiment Structure and Vignette Stimuli (extensive codebook upon request)

1	General introduction
2	Socio-demographic questionnaire: <ul style="list-style-type: none"> - year of birth - gender - religion - nationality - field of study.
3	PSM-scale (Kim, 2011)
4	SVO-measure (Bogaert et al., 2012)
5	Probability discounting task (Madden et al., 2009)
6	Introduction to bribery scenarios [all study participants]: <p>‘Please imagine that you are a first year student again who has just received his results for the end of term exams. You passed all courses but one. You failed to pass one very difficult course you really do not want to redo. The consequence is that your prerequisites in the next academic year become compromised and you are unable to participate in other courses so that chances are real that you will not succeed to obtain your degree within the foreseen four years.</p> <p>Meanwhile, you informed the assistant of this course in order to receive written feedback. This feedback indicates that you achieved 9.4/20. You know that if you would have scored 9.5/20, your result would be rounded off to 10/20 so that you would have passed the exam and the study program of the first year would have been accomplished.</p> <p>What would you do in the following two situations?’</p>
7	Vignettes: Study participants randomly received two out of three vignette treatments, each followed by Likert-type scale items
A	“Emotional plea”: white corruption <p>‘You make an appointment with the lecturer of this course and inform him about your situation. Rumour goes that, in the past, the lecturer let himself be influenced in a personal conversation. After you became emotional, you ask the lecturer if he,</p>

	<p>due to the circumstances, would consider being a little bit milder with regard to your result so that you can finally succeed in this course. Your future relies on this.'</p> <p>The following statements relate to the preceding scenario. Please indicate to what extent you agree with the following statements:</p> <ol style="list-style-type: none"> 1. This scenario appears realistic. [1=totally disagree; 4=totally agree] 2. How likely do you think you will try to influence your lecturer in an attempt to have your grade adjusted upward? [1=very unlikely; 5=very likely] 3. How justified do you find influencing your lecturer in an attempt to have your grade adjusted upward? [1=very unjustified; 5=very justified] 4. How would you feel about influencing your lecturer in an attempt to have your grade adjusted upward? [1=very uncomfortable; 5=very comfortable] 5. I think that influencing my lecturer in an attempt to have my grade adjusted upward in this situation would be a mistake. [1=totally disagree; 5=totally agree].
B	<p>“Car mechanic”: grey corruption</p> <p>‘You make an appointment with the lecturer of this course and inform him about your situation. Rumour goes that, in the past, the lecturer let himself be influenced in a personal conversation. The lecturer is a little bit too late and apologizes. He experienced car trouble, which is very unfortunate for the reason that he has to leave for an important conference tomorrow. However, your father is a car mechanic. You offer your lecturer to repair the car, free of charge and with the highest priority, on the condition that your result is reconsidered.’</p> <p>The following statements relate to the preceding scenario. Please indicate to what extent you agree with the following statements:</p> <ol style="list-style-type: none"> 1. This scenario appears realistic. [1=totally disagree; 4=totally agree] 2. How likely do you think you will try to influence your lecturer in an attempt to have your grade adjusted upward? [1=very unlikely; 5=very likely]

		<p>3. How justified do you find influencing your lecturer in an attempt to have your grade adjusted upward? [1=very unjustified; 5=very justified]</p> <p>4. How would you feel about influencing your lecturer in an attempt to have your grade adjusted upward? [1=very uncomfortable; 5=very comfortable]</p> <p>5. I think that influencing my lecturer in an attempt to have my grade adjusted upward in this situation would be a mistake. [1=totally disagree; 5=totally agree].</p>
	C	<p>“Brown envelop”: black corruption</p> <p>‘You make an appointment with the lecturer of this course and inform him about your situation. Rumour goes that, in the past, the lecturer let himself be influenced in a personal conversation. You ask him to reconsider your score and therefore offer him an envelope with €500 in exchange.’</p> <p>The following statements relate to the preceding scenario. Please indicate to what extent you agree with the following statements:</p> <p>1. This scenario appears realistic. [1=totally disagree; 4=totally agree]</p> <p>2. How likely do you think you will try to influence your lecturer in an attempt to have your grade adjusted upward? [1=very unlikely; 5=very likely]</p> <p>3. How justified do you find influencing your lecturer in an attempt to have your grade adjusted upward? [1=very unjustified; 5=very justified]</p> <p>4. How would you feel about influencing your lecturer in an attempt to have your grade adjusted upward? [1=very uncomfortable; 5=very comfortable]</p> <p>5. I think that influencing my lecturer in an attempt to have my grade adjusted upward in this situation would be a mistake. [1=totally disagree; 5=totally agree].</p>
8	Acknowledgement and end of study.	

A.2 Probability discounting questionnaire based on Madden et al. (2009)

Item No.	Secure option	Probabilistic option			Discounting parameter at point of indifference
	Reward A_{Si}	Probability p_{Pi}	Reward A_{Pi}	Expected value	
1	€20	10 %	€80	€8	.33
2	€20	13 %	€80	€10	.45
3	€20	17 %	€80	€14	.61
4	€20	20 %	€80	€16	.75
5	€20	25 %	€80	€20	1.00
6	€20	33 %	€80	€26	1.48
7	€20	50 %	€80	€40	3.00
8	€20	67 %	€80	€54	6.09
9	€20	75 %	€80	€60	9.00
10	€20	83 %	€80	€66	14.65
11	€40	18 %	€100	€18	.33
12	€40	22 %	€100	€22	.42
13	€40	29 %	€100	€29	.62
14	€40	33 %	€100	€33	.74
15	€40	40 %	€100	€40	1.00
16	€40	50 %	€100	€50	1.50
17	€40	67 %	€100	€67	3.04
18	€40	80 %	€100	€80	6.00
19	€40	86 %	€100	€86	9.21
20	€40	91 %	€100	€91	15.17
21	€40	40 %	€60	€24	.33
22	€40	46 %	€60	€28	.43
23	€40	55 %	€60	€33	.61
24	€40	60 %	€60	€36	.75
25	€40	67 %	€60	€40	1.01
26	€40	75 %	€60	€45	1.50
27	€40	86 %	€60	€52	3.07
28	€40	92 %	€60	€55	5.75
29	€40	95 %	€60	€57	9.50
30	€40	97 %	€60	€58	16.17

Note: Hypothetical amounts of reward.

A.3 Task items of Social Value Orientation (SVO) scale by Bogaert et al. (2012)

Trial No.	Item No.	own pay-out	other person's pay-out	Δ^a	choice motive
1	1	480	80	400	competitive
	2	540	280	260	individualistic
	3	480	480	0	prosocial
2	4	560	300	260	individualistic
	5	500	500	0	prosocial
	6	500	100	400	competitive
3	7	520	120	400	competitive
	8	520	520	0	prosocial
	9	580	320	260	individualistic
4	10	500	100	400	competitive
	11	560	300	260	individualistic
	12	490	490	0	prosocial
5	13	560	300	260	individualistic
	14	500	500	0	prosocial
	15	490	90	400	competitive
6	16	500	500	0	prosocial
	17	500	100	400	competitive
	18	570	300	270	individualistic
7	19	510	510	0	prosocial
	20	560	300	260	individualistic
	21	510	110	400	competitive
8	22	550	300	250	individualistic
	23	500	100	400	competitive
	24	500	500	0	prosocial
9	25	480	100	380	competitive
	26	490	490	0	prosocial
	27	540	300	240	individualistic

Notes: Hypothetical pay-out amounts in € ^a Δ =pay-out difference.

A.4 Details of Dependent Variable Validation

Table A4.1 reports the results of the factor analysis and unique variances for each item as well as the respective Kaiser-Meyer-Olkin (KMO) measure of sample adequacy. KMO mean values range between 0.82 (Germany) to 0.83 (Belgium and the Netherlands) which indicates meritoriously high sample adequacy (Kaiser, 1974).

Table A4.1: Results of factor analysis of dependent variable by country sample

Factor item	Belgium			Germany			The Netherlands		
	Factor 1	U	KMO	Factor 1	U	KMO	Factor 1	U	KMO
Likelihood	0.80	0.37	0.84	0.75	0.43	0.85	0.83	0.30	0.83
Justification	0.86	0.26	0.79	0.86	0.26	0.77	0.88	0.23	0.78
Affect	0.78	0.39	0.85	0.79	0.38	0.83	0.81	0.34	0.85
Mistake ^a	0.76	0.43	0.87	0.73	0.47	0.84	0.71	0.50	0.90
Eigenvalue	2.56			2.46			2.63		
Bartlett Chi ² (6)	946.35			866.76			914.01		
p	0.000			0.000			0.000		
Cronbach's α	0.880			0.865			0.885		

Notes: U= uniqueness; KMO = Kaiser-Meyer-Olkin measure; ^a reversed item.

Prior to factor analysis, Bartlett's test for sphericity was conducted to test whether factor items are inter-correlated which is a prerequisite for factor analysis. As expected from the analysis of the correlation matrix of the items (see table A4.2), the derived factor model scored very high across all country samples and the significant Chi²-testing results of Bartlett's test (Chi²(6): 866.76 – 945.35, $p < 0.000$) indicate that factor items are interrelated and should load onto the same factor(s). The factor analysis results show that the four items strongly and significantly load onto one single factor. This finding is, again, stable across all three country samples, indicating high internal and external validity of the developed construct of 'acceptability of bribing' with its four components.

A.4.2: Correlations between factor items of dependent variable by study

Factor item	Study 1 (BEL)				Study 2 (GER)				Study 3 (NL)			
	a	b	c	d	a	b	c	d	a	b	c	d
a Likelihood	1				1				1			
b Justification	.72	1			.68	1			.77	1		
c Affect	.638	.71	1		.64	.71	1		.69	.74	1	
d Mistake ^a	.62	.68	.61	1	.54	.69	.56	1	.60	.64	.59	1

Note: All correlations significant with $p < 0.000$; ^a reversed item.

Item uniqueness (U) is usually regarded as a measure of the percentage of variance for the item that is not explained by the common factors. Values of $U = 0.6$ are considered as high. In our analysis, uniqueness values range from $U = 0.23$ to 0.50 . Since items with lower uniqueness matter less for explaining the variance observed, this means that, firstly, *justification* was relatively less important in explaining the variance observed than items with relatively higher uniqueness values, e.g. *mistake (reverse)* ranging from $U = 0.43$ to 0.50 or *affect* ($U = 0.34 - 0.38$). Secondly, across all three samples, items are in a relatively stable and narrow range which indicates only subtle differences between samples and further substantiates the measure's internal validity in measuring one underlying construct and its robustness against country-specific influences, indicating high external validity. Because of the high inter-correlation and the strong factor model fit, no item was excluded and the final dependent variable of this study is created by arithmetically sum-scoring the four indicators *likelihood*, *justification*, *affect*, and *mistake* (reversed).

Reference:

Kaiser, Henry F. (1974). An index of factor simplicity. *Psychometrika*, 39(1), 31–36.