

An Examination of Moderated and Mediated Relationships Among Individual and Task Related Variables on Budgetary Slack

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Abstract

The present study extends understanding of aspects of managerial budgeting by addressing calls for more nuanced examinations of relationships among the determinants of budgeting slack. We find differential effects for intention to create slack and slack behavior for an adult sample of managers resulting from the expression of moderation and mediation. Specifically, the combined influence of peer influence and relativism was implicated in intention to create budgetary slack with stronger effects of peer influence on intention for individuals higher on relativism. Further, relativism and risk tolerance were found to interact to influence the slack intention-behavior relationship with stronger effects of intention on slack creation for individuals higher on relativism and lower on risk tolerance. This research addresses academic and managerial imperatives as to how to effectively leverage future managerial budgeting research and practice.

Keywords: Peer influence, relativism, risk tolerance, budgetary slack, and managerial budgeting

Introduction

Budgeting is a process at the core of organizational life. The process is of interest to researchers and practitioners because it is a management tool that involves translating objectives and strategies into financial projections tied to critical organizational activities. Participative budgeting, a widely used approach for budget determination, allows a subordinate to use their local information in the budgeting process. This can result in

inefficient (and unethical) behavior as agents may intentionally inflate production requirements or underestimate production capabilities as a means of obtaining favorable performance evaluation and compensation which leads to the creation of budgetary slack (Church, Kuang, & Liu, 2019; Young, 1985; Libby, 2003; Abdel-Rahim & Stevens, 2018). While evidence of the prominence of slack in budgets has been well documented there are several unresolved issues and potential opportunities to develop the literature (Dunk & Nouri, 1998). Budgetary slack has also been viewed as a potential contributor to innovation in that slack might allow for the pursuit of unique strategies and projects that would not be possible with more constrained budgets (Nohiria & Gulati, 1996). However, as noted by these authors, too much slack may inhibit innovation by contributing to a lack of discipline and complacency and too little slack may inhibit experimentation detracting from innovation.

Clearly, understanding budgeting slack creation is an important organizational imperative which explains the attention it has received over the past forty years yet significant questions exist particularly when one considers both the moral and control aspects inherent in budgetary slack behavior (Daumoser, Hirsch, & Sohn, 2018). The ethical behavior and budgetary slack literature have examined factors ranging from individual/personal to organizational related that are implicated in an individual decision maker's behavior (Douthit & Majerczyk, 2019; Hartman & Mass, 2010; Ozera & Yilmaz, 2011; Hobson, Mellon, & Stevens, 2011). Inconsistent and weak findings point to the need for theoretically grounded examinations of more nuanced (moderated and mediated) relationships among the determinants of budgeting slack (Daumoser, et al., 2018). To this end, we integrate literature across well-established theoretical frameworks to propose and test unique relationships among normative influence, ethical ideology, perceived risk, and behavioral domains in explaining budgetary slack creation. To our knowledge, this is the first study to integrate these areas thereby addressing conceptual and empirical issues related to boundary conditions which have implications for managing the budgeting process. We now turn attention to relevant literature for the development of reasoning for hypotheses.

Intention and Behavior

Notable models of cognitive determinants of volitional behavior (Fishbein, 1980; Ajzen, 1985; 1991) have conceptualized an individual's intention as an important proximal motivator of subsequent behavior. Substantial evidence across a host of behavioral domains supports this view (Sheeran, 2002). In these conceptions, intention is the conduit for the influence of other distal antecedents on behavior. Yet, in prior ethical research *behavior* is sometimes excluded and in prior managerial reporting research *intention* is sometimes excluded (Kish-Gephart et al., 2010; Huddart & Qu, 2013) thereby limiting the ability to examine the intention-behavior relationship. Researchers have also noted intention-behavior "gaps" suggesting that mechanisms translating intention to behavior require further elaboration and examination (Sheeran & Abraham, 2003).

Indeed, these concepts are important in volitional and ethical behavior research in that they impact both theory and methodological considerations (Kish-Gephart, Harrison, & Trevino, 2010). Given findings that some antecedents have been more closely related

to intention and some antecedents have been more closely related to behavior (Kish-Gephart et al., 2010), we argue that, on theoretical grounds, it is important to include both intention and behavior in budgetary slack research. With volitional (including ethical) models of behavior conceiving of intention as a significant proximal antecedent to behavior we believe intention to create budgetary slack should mediate the impact of antecedents on slack creation. Further, moderators may impact boundary conditions at which the effects of intention on behavior may or may not be observed. We now turn attention to the development of reasoning supporting the combined influence of two antecedents of intention to create budgetary slack, peer influence and the ethical ideology of relativism.

Likelihood of Accepting Influence

Prominent volitional and ethical frameworks (Ajzen, 1991; Rest, Narvaez, Bebeau, & Thoma, 1999) have included normative considerations as antecedents to an individual's behavior. The Rest framework incorporates the notion of activation of a "norms" schema during moral reasoning which can be viewed as accounting for an individual's sensitivity to social norms (Huddart & Qu, 2013). Ajzen's Theory of Planned Behavior includes a subjective norm component consisting of the likelihood that referent individuals with whom a person is motivated to comply will (dis)approve of a behavior. Of interest from the perspective of the present study have been results from research (including meta-analytic work) related to the Theory of Planned Behavior which find weak or inconsistent effects for normative influence in the explanation of behavioral intention (Armitage & Conner, 2001). Questions have been raised in the social psychology literature about the need for more research on normative influence as well as the need to examine other conceptions of normative influence in models predicting behavior (Armitage & Conner, 2001; Parker & Castleman, 2009). In response to calls for examination of normative influence beyond subjective norms (or injunctive norms) which take into consideration what referent others *think* you should do, the concept of behavioral or descriptive norms, what others are doing (Cialdini, Kallgren, & Reno, 1991), has been raised as worthy of examination in future research (Huddart & Qu, 2013). The present research explores the likelihood of accepting peer influence in a budgeting context. Peers have been found to be a significant source of influence in organizations (Yukl, 2013). The behavior of peers can establish descriptive norms (what an individual is doing) which, in contexts of limited information or when they conflict with injunctive norms (what you ought to do), make descriptive norms particularly salient (Cialdini & Trost, 1998; O'Fallon & Butterfield, 2012; Cialdini et al., 1991; Keizer, Lindenberg, & Steg, 2008).

However, research exploring the influence of peers on managerial reporting is not conclusive (Brunner & Ostermaier, 2019) mirroring the mixed results related to normative influence in models explaining a host of behaviors (including ethical behavior) explored with the Theory of Planned Behavior. While theory and some research points to peer influence on ethical behavior and, more specifically, managerial reporting behavior weak and/or mixed results might point to the influence of moderation (and mediation) which creates boundary conditions for the likelihood of accepting peer influence. Peer influence can be viewed as a form of pressure which helps to influence

behavior in specific contexts. In their General Model of Pressure (Summers et al., 1995; Elliott & Eisdorfer, 1982) identified pressure as an antecedent of behavior, which *combined with individual characteristics* to elicit a response. We believe the ethical ideology of relativism plays a role in addressing when the likelihood of accepting peer influence will affect individuals' motivation and subsequent behavior to engage in the creation of budgetary slack.

Relativism

One of the more widely explored ethical ideologies has been formulated by Forsyth (1980; 1981). According to Forsyth, individuals can be classified along two continua that represent preferred ways of thinking: idealism and relativism. As individuals exhibit higher levels of idealism, they tend to display more faith in moral principles which are used to gage right and wrong conduct (Forsyth, et. al, 2008). This contrasts to those exhibiting higher levels of relativism. Relativists place greater emphasis on personal sentiments and gain associated with the task situation and are oriented to achieving the best outcomes in the situation while rejecting universal ethical guidelines (Forsyth, 1992).

Some research suggests relativism could be positively related to unethical behavior (Kish-Gephart, et. al, 2010; Greenfield, et. al, 2008; Henle, et. al, 2005; Tian, 2008). However, paralleling the empirical work on normative influence, mixed results have also been reported for the relationship between ethical ideologies and behavior (Barnett, et. al, 1994; Forsyth & Nye, 1990; Lin & Ding, 2003; Trevino, 2007).

When examining the context of management reporting, explorations of the effects of relativism on ethical intention and behavior are somewhat clearer. Keller (1998) found individuals higher on relativism to be more likely to engage in unethical behavior for a tax reporting simulation. Consistent with Keller, relativism has been implicated in budgetary slack (Douglas & Weir, 2000; Douglas, et al., 2007). In another study that examined ethical ideology and budgeting slack, Abdullah (2013) found intention to create slack was greater for high relativists than for low relativists although the effect was not statistically different. Further, high relativists were found to create more slack than low relativists (for two of three budgeting conditions). Nasir, et. al (2014) observed a significant relationship between relativism and earnings manipulation. Harvey (2015) found a positive correlation between propensity to create budgetary slack and one's level of relativism.

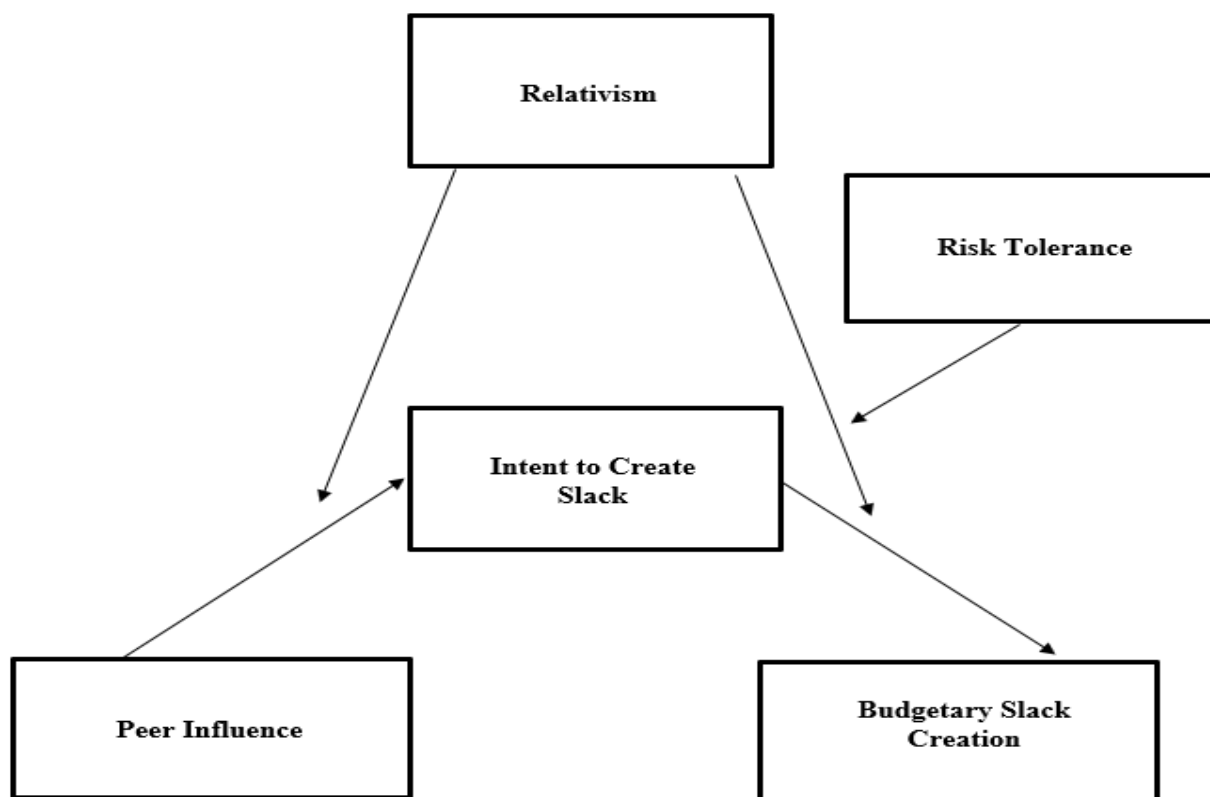
While prior research has largely examined main effects for relativism, given prior mixed results for the construct in ethics and managerial reporting research, we believe the concept could be useful as a moderator in explaining why some individuals respond to the same peer influence differently. Paralleling research on workplace reactions to injustice which found relativism to interact with justice perceptions (Hastings & Finegan, 2011) we believe that relativism will interact with the likelihood of accepting peer influence in a budget management context. Given relativistic individuals are more situationally oriented and sensitive to contextual cues they should be more likely to incorporate normative behavior into their thinking (or activate a schema in the

terminology of cognitive psychology) which would increase the salience of peer information that relates to the budgeting task. Thus, for individuals higher on relativism, the influence of the likelihood of accepting peer influence on budgetary slack creation should be stronger than for individuals lower on relativism.

Therefore, we formally propose:

H1: The likelihood of accepting peer influence relating to budgetary slack will be moderated by an individual's relativism to influence intention to create budgetary slack such that the impact of peer influence on intention to create slack will be stronger for individuals higher on relativism.

Figure 1: Hypothesized Model



Recall that relativism has been tied to behavior as well as intention with mixed results in the ethical decision-making domain and somewhat stronger results in the managerial reporting domain. Therefore, we believe relativism is also likely implicated in the budgeting slack intention-behavior relationship. Further, other individual (trait) and task factors have been recognized for the potential to influence the intention-behavior relationship (Allen, Weeks, & Moffitt, 2005; Shroková, Osiyevskyy, & Bogatyreva, 2015; Pfeffer, Englert, & Mueller-Alcazar, 2020). We now develop thinking as to how the nature of the budgeting task makes risk tolerance in addition to relativism a likely moderator of the intention-behavior relationship.

Risk Tolerance

Risk tolerance or preference has been identified as a person-level factor that influences an individual's behavior in domains such as entrepreneurship, tax compliance, and organizational budgeting (Barbosa, Gerhardt, & Kickul, 2007; Alabede, Ariffin & Idris, 2011; Young, 1985). As such, it determines an individual's risk propensity, the tendency to avoid or take risks in a decision-making context (Sitkin & Pablo, 1992; Mullins & Forlani, 2005). In terms of budgetary slack behavior, evidence points to individual-level risk aversion as a contributing factor to the creation of slack (Young, 1985; Kim, 1992). Perceived risk has also been implicated in research comparing slack-inducing (no differences observed between risk neutral and risk averse individuals) versus truth-inducing (risk neutral individuals decreased slack and risk averse individuals did not) budgeting processes. The work of Kim (1992) concluded that risk preference is related to the combined influence of context and disposition.

In participative budgeting, task uncertainty is tied to an individual perceiving themselves to be lacking in critical information about the task. In this conception, theorists argue that it is the individual's construal of their situation rather than objective characteristics of the context that is key to understanding the impact of the construct (Milliken, 1987; Cannon & St. John, 2007). State uncertainty results when an individual does not feel confident in their understanding of key contextual aspects (Milliken, 1987). Goldhaber (1993) also highlights the association of probabilistic work-related information with employee uncertainty. In the present study, perceived certainty with the accuracy of prior budget forecasts is a key input for subsequent budget determination that can relate to state uncertainty. Higher levels of uncertainty associated with a task have been associated with employee anxiety. Thus, under uncertainty, individuals are motivated to address their undesirable state (Mullarkey et al., 1997; Goldhaber, 1993). Uncertainty and anxiety have been tied to coping responses to reduce the aversive state (Lazarus & Folkman, 1984; Kramer, 1999).

During participative budgeting, personal (self-related) interests will dominate relativist's mindset in decision making. As such, an individual's risk tolerance should be more salient for these individual's as personal evaluation and compensation will take precedent over organizational interests (efficient and ethical budgeting behavior). This self-regulatory processing should drive efforts to preserve self-interests. Therefore, the expression of relativism and risk preference in the relationship between the most proximal determinant - intention to create budgeting slack - and actual slack creation should result in individuals *higher* on relativism and *lower* on risk tolerance manifesting stronger effects on slack behavior. We extend thinking in the area to include relativism in addition to risk tolerance in explaining self-regulatory motivation in the intention-behavior relationship in participatory budget determination.

Thus, we posit:

H2: The peer influence x relativism interaction will work through (be mediated by) intention to influence slack creation. Intention, in turn, will be moderated by the interaction of relativism and risk tolerance to influence slack creation. Thus, the

influence of peer influence working through intention to influence slack will be stronger for individuals higher on relativism and lower on risk tolerance.

Method

Sample and Procedure

The population of the research included individuals currently living in the United States. The target population of the study was limited to those between the ages of 18 and 65, and currently working in a business-related profession. The sample included those who opted-in for market research and were included in the Qualtrics consumer database.

Qualtrics solicits participants from various sources, including websites, targeted email lists, permission-based networks, and social media. The 'opt-in for market research' process requires respondents to submit an initial registration form requesting to participate in market research studies. Potential respondents build their profile from a standardized list of questions. The panels then use the profiles to select studies that would best fit the case specifications. All of Qualtrics' panels have a double opt-in requirement. Those who do not reconfirm were not contacted to participate in a survey. Consumer panel members' names, addresses, and dates of birth are typically validated via third party verification. Panel members are sent an email invitation or prompted on the respective survey platform to proceed with a given survey. To avoid self-selection bias, Qualtrics does not include specific details about the contents of the survey in the survey invitation. It provides a hyperlink which takes the respondent to the survey as well as mentions the incentive offered. Incentives are based on the length of the survey, their specific panelist profile, and target acquisition difficulty (Qualtrics ESOMAR 28, 2014). All data collected from the study were anonymous and/or secured via encryption and passwords (Qualtrics, 2018). The population sampled was determined by those who responded to the email invitation or prompted on the respective survey platform to proceed with the survey. This procedure resulted in 406 usable surveys.

The average age of U.S. respondents was 36. Sixty-nine percent of the respondents were female. Sixteen per cent of respondents had some college, 35% held a bachelor's degree, and 22% held a postgraduate degree. Managers/professionals and sales occupations accounted for 56% and 26% of respondents, respectively. The average number of years of professional experience for a respondent was fifteen.

Case Study Scenario

Participants were invited to respond to a case study scenario (Abdullah & Brink, 2017). The case study provided participants information regarding their role as a manager at a hypothetical manufacturing company. As a production manager, participants were required to set the cost target based on their best estimation of the actual cost. The case provided the manager with a private forecasting system that only the manager had knowledge of. With this knowledge, the participant used the forecast however they wanted when setting the production cost target for the period. Participants were provided with the information that historically, the forecasting system generated predictions of actual production costs with 75% accuracy. This level of accuracy was employed as a representation of lower levels of accuracy as prior research has

employed 90% as high and 70% for low system accuracy (Abel-Rahim & Stevens, 2018).

As managers they were to use the predication along with their personal experience and expertise to develop their final production cost target. The case study informed participants that their peers have the same gender, level of experience, job description, responsibility, and workload. The compensation structure consists of a fixed wage and a share in the cost savings. Cost savings are defined at the excess of targeted production costs over actual production costs.

Measures

The survey included measures related to the likelihood of accepting peer influence, relativism, intention to create budgetary slack, risk tolerance, budgetary slack creation, and demographic descriptors. *Likelihood of accepting peer influence.* This measure assessed the likelihood of overstating cost targets given that your peer (production manager) discloses that they always overestimate their cost target captured via an eleven-point item scaled “extremely unlikely” to “extremely likely” (Abdullah & Brink, 2017).

Relativism. Participants responded to ten statements from Forsyth’s (1980) Ethical Position Questionnaire (EPQ). The EPQ measures ethical ideology dimensions. For each statement, participants rated their degree of agreement using a nine-point scale ranging from “completely disagree” to “completely agree.” In preliminary research on the EPQ we assessed the convergent validity of the items. This process resulted in dropping two items from the original relativism scale (the first and tenth items). The refined measure was above recommended thresholds for composite reliability and internal consistency (.88 and .88, respectively). Note that this approach is consistent with prior research utilizing a reduced number of the original scale items (Vitell, et al., 2003). Individual item responses were summed and averaged to create a relativism score.

Intention to create budgetary slack was assessed via an eleven-point item scaled “extremely likely to report a targeted production cost that is *less* than the forecast” to “extremely likely to report a targeted production cost that is *higher* than the forecast.” (Abdullah & Brink, 2017). *Risk tolerance* was based on respondent preferences for one of two choices on a series of options based on a sure payoff (certain payment of \$5) versus one with a probabilistic payoff (10% chance of \$10). Nine options were provided that always included the choice of the certain outcome and a choice of the probabilistic outcome ranging from a 10% chance of \$10 to a 90% chance of \$10. Respondents who chose a certain option were scored a “0” while respondents who chose a probabilistic option were scored a “1” with the summed scores representing overall risk tolerance. Thus, on this assessment, a respondent’s risk tolerance was measured on a ten-point scale ranging from 1 (low risk tolerance) to 10 (high risk tolerance). Although risk preference has been measured in different ways, this procedure of inferring risk tolerance through choice is consistent with prospect theory and is believed to possess ecological validity (Hsee & Weber, 1999; Young, 1985).

Budgetary slack. Participants were given a forecast of actual production costs. The budgetary slack variable is the variance between submitted production cost target and the forecast of actual production costs. Participants were asked three questions about the production cost targets they set in response to three specific forecasts. Assumed forecast of production costs was in the amounts of \$225,000, \$400,000, and \$575,000. The range of possible production cost targets ranged from \$200,000 to \$600,000. These forecasts provided participants with opportunities to create low, medium, or high levels of budgetary slack. For each question, the forecast was subtracted from the production cost target indicated by the participant to obtain a measure of budgetary slack. An overall slack score was created by averaging the three estimates (Abdullah & Brink, 2017).

The literature related to the theoretical constructs of interest has identified potential individual difference variables that could potentially impact decision-making. Therefore, we include gender, years of work experience, and level of education to account for their effects in the present budgeting context (Guthrie, 2003; Guss & Wiley, 2007; Petrocelli, Tormala, & Rucker, 2007; Shirokova, Osiyevskyy, & Bogatyreva, 2015; Jung et al., 2018). Table 1 provides the means, standard deviations, and correlations for measures used in this study.

Table 1: Descriptive Statistics for Study Variables

	Mean	Standard Deviation	X1	X2	X3	X4	X5
X1 Peer Influence	6.67	2.70	--				
X2 Relativism	5.83	1.68	.34*	--			
X3 Intent	7.10	2.00	.37*	.28*	--		
X4 Risk Tolerance	4.48	2.33	.08	.03	.02	--	
X5 Budgetary Slack**	14.98	71.48	.32*	.18*	.34*	.03	--

* Correlation is significant at $p < .01$.

** Budgetary slack in \$ thousands.

Results

The present research sought to review potential indirect effects, including moderating and mediating relationships. Researchers have established procedures to test for indirect and direct effects of an independent variable (potential moderators and mediators) for a single dependent variable (Preacher and Hays, 2004). Using what is described as a powerful “bootstrap” procedure resulting in 1,000 samples, regression equations are estimated from the mean of those estimates. This process allows researchers to generate bias-corrected confidence intervals related to possible indirect

effects. It is hypothesized that the likelihood of accepting peer influence will be moderated by relativism to influence intention to create budgetary slack. It is further hypothesized that the peer influence x relativism interaction will work through (be mediated by) intention to influence slack creation. Finally, intention, in turn, will be moderated by the interaction of relativism and risk tolerance to influence slack creation.

Replicating the procedures recommended by Preacher et al. (2007), we generated two regression equations to estimate a model that examines budgetary slack creation. In the initial equation, likelihood of accepting peer influence, relativism, the interaction term (peer influence x relativism), and covariates were entered as predictors of intention to create slack. For the second equation, peer influence, relativism, intent, risk tolerance, all relevant interaction terms, and covariates were entered as predictors of budgetary slack.

Hayes (2013) indicated that conditional process analysis is required for a hypothesized model because the effect of the independent variable should differ in strength as a function of the proposed moderating and mediating effects to impact the dependent variable. The variables of the present study were entered into a Process macro within SPSS (Hayes, 2013). The researchers used mean centering, given potential negative effects of collinearity (Shieh, 2011). Results of the analysis to test the conditional effects model (Figure 1) are presented in Table 2.

Table 2: Linear Regression Results for Budgetary Slack

	Consequent					
	Intent			Budgetary Slack		
Antecedents	Coeff.	SE	p	Coeff.	SE	p
Peer Influence	.23	.04	.00	6.04	1.35	.00
Relativism	.23	.06	.00	1.13	2.11	.59
Peer Influence X Relativism	.05	.02	.01	.86	.74	.25
Intention	--	--	--	8.11	1.80	.00
Intention X Relativism	--	--	--	-.07	.98	.95
Risk Tolerance	--	--	--	.13	1.53	.94
Peer Influence X Risk Tolerance	--	--	--	.97	.58	.09
Intent X	--	--	--	-1.90	.81	.02

Risk Tolerance

Relativism X Risk Tolerance	--	--	--	-.85	.88	.34
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Intent X Relativism X Risk Tolerance	--	--	--	.85	.38	.03
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Peer Influence X Relativism X Risk Tolerance	--	--	--	-.23	.29	.42
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Covariates

Gender	-.32	.20	.10	3.89	7.09	.59
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Years of Prof. Experience	.01	.01	.05	.39	.26	.13
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Education	.05	.07	.49	3.32	2.34	.16
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Constant	.04	.47	.92	-12.72	16.85	.45
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$R^2 = .19$
 $F(6, 406) = 15.99, p < .00$

$R^2 = .20$
 $F(14, 398) = 7.05, p < .00$

Note: R^2 change for the peer influence X relativism interaction effect on intention = .013. R^2 change for the intent X relativism X risk tolerance interaction effect on intention = .010.

Table 2 indicates support for H1 as the proposed interaction effect (peer influence x relativism) is significant ($p < .01$) in the regression equation predicting intention to create slack even when accounting for the effects of the three covariates. Additionally, H2 is supported in that the peer influence x relativism interaction is not significant in the equation predicting budgetary slack creation ($p < .25$). Further, note that, as predicted, a significant intent x relativism x risk tolerance interaction is observed in the equation predicting budgetary slack creation ($p < .03$) even given the effects of the covariates.

Tables 3 and 4 display the bootstrapping results for the conditional effects on intent and slack creation at various levels of the moderator(s) (i.e., low = one standard deviation below the mean; medium = at the mean; and high = one standard deviation above the mean). With respect to intent, the "Effect" column in Table 3 shows the effects of moderation (peer influence x relativism) on intention to create slack. Note the effects are in the predicted direction with the greatest effect for individuals higher on relativism (in support of H1). The "Effect" column in Table 4 details the effects of moderation (relativism x risk tolerance) on peer influence working through intent to influence

budgetary slack creation. Note that significant effects are observed for most combinations of moderation with stronger effects trending towards higher relativism and lower risk tolerance (in support of H2). In fact, effects are nonsignificant for higher risk tolerant individuals. Note that peer influence also evidenced a direct effect on slack creation.

Table 3: Conditional Effects of Peer Influence on Intent to Create Budgetary Slack at Values of the Moderator (Relativism)

Relativism*	Effect	SE	p	Lower Level CI	Upper Level CI
-1.58	.160	.045	.00	.070	.249
0.42	.233	.035	.00	.163	.302
1.79	.312	.047	.00	.219	.404

*Values for the moderator are for the mean and +/- one SD from the mean.

Note: The conditional effects of peer influence on intention are significant at all levels of relativism (one standard deviation below the mean, at the mean, and one standard deviation above the mean), as all confidence intervals (lower level CI - upper level CI) exclude zero indicative of statistically significant effects.

Table 4: Conditional Indirect Effects of Peer Influence Working Through Intent on Budgetary Slack Creation at Values of the Moderators (Relativism and Risk Tolerance)

Relativism*	Risk Toler.*	Effect	BootSE	Boot Lower Level CI	Boot Upper Level CI
-1.58	-2.48	2.60	1.05	.74	4.90
-1.58	.52	1.04	.66	.08	2.61
-1.58	2.28	.12	.77	-1.25	1.90
0.42	-2.48	2.97	.81	1.50	4.71
0.42	.52	1.66	.57	.69	2.95
0.42	2.28	.90	.73	-.34	2.53
1.79	-2.48	2.78	1.24	.46	5.31
1.79	.52	2.43	1.05	.63	4.79
1.79	2.28	2.23	1.44	-.14	5.44

*Values for the moderators are for the mean and +/- one SD from the mean.

Note: The conditional indirect effects of peer influence working through intent to influence slack creation are generally significant at various levels of the moderators with confidence intervals (boot lower level CI – boot upper level CI) that exclude zero indicative of statistically significant effects. However, at higher levels of risk tolerance, note that boot level CIs are not significant in that intervals do not exclude zero.

As a precaution, variance inflation factors (VIFs) were examined to assess the effects of collinearity among the independent variables, interaction terms, and covariates. VIFs ranged from 1.02 – 1.50 for the first equation and ranged from 1.04 – 1.50 for the second equation. Thus, due to mean centering, a collinearity problem is not indicated (Hair, Anderson, Tatham, & Black, 2006).

In summary, consistent with predictions, the likelihood of accepting peer influence and relativism were found to interact to influence an individual's intention to create budgetary slack with stronger effects of peer influence for individuals higher on relativism. Also consistent with expectations, the peer influence x relativism interaction was found to work through intention to influence slack creation. Further the impact of peer influence working through intention to influence slack was found to be stronger for individuals higher on relativism and lower on risk tolerance.

Discussion

This study melds theory and research from ethical decision making, volitional control, managerial reporting, and organizational literature to propose and test relationships among peer influence, relativism, intention to create budgetary slack, risk tolerance, and slack behavior with support found for moderated and mediated relationships among variables. To our knowledge this is the first study to examine these combined relationships in a managerial reporting context.

Future Research

First, with respect to peer influence, results point to more complex relationships in budgetary slack creation than currently portrayed in the literature. While main effects for peer influence have been reported in the budgeting slack literature - we also observed a direct effect for peer influence on budgetary slack creation. However, we hypothesized and found an interaction of peer influence with relativism impacting intention as well peer influence working through intention moderated by relativism and risk tolerance to influence slack behavior. This points to the potential importance of peer influence in future research given its observed indirect *and* direct effects. Would effects be stronger when multiple peers report budgetary slack creation?

Second, given the dual moderation indicated for relativism on both intent and behavior, findings point to the need to examine other potential contextual antecedents that might be subject to moderation by relativism such as superior influence and codes of conduct. Would findings related to these and other antecedents of slack intention and or behavior weaken or strengthen through interaction with this ethical ideology?

Results also point to the potential usefulness of including intention in addition to behavior in models examining budgetary slack. Our observation echoes observations in the ethical behavior literature that different ethical antecedents can be related in different ways to intention and/or behavior (Kish-Gephart et al., 2010). As noted by these authors, variables working through intention to influence behavior might be related to more deliberative, self-regulatory processing owing to their relationship to this intermediate motivational concept – intention. In contrast, variables directly related to

behavior might be associated with a less deliberate, heuristic processing. Clearly, more research is needed to explore this conception. Would the inclusion of intention in future budgetary slack research alter previous observations of direct effects for some antecedents on budgetary slack?

The present study further extends understanding of the intention-behavior relationship through the integration of relativism and risk tolerance as moderators in the context of managerial budgeting. Results of the present study generally align with findings of previous research with low risk tolerance associated with budgeting slack behavior (Young1985; Kim, 1992). We extend thinking in the area by examining and finding more complexity in the expression of moderators (intention, relativism, and risk tolerance) implicated in budgetary slack creation. We thus parallel the call for more nuanced examinations of relationships among the determinants of budgeting slack (Daumoser, et al., 2018). Present results also beg the question as to what other moderators may be in play in the slack intention-behavior relationship. One such construct may be locus of control as it has been proposed as a variable that could impact slack creation and has been found to moderate the intention-behavior relationship in health-related research (Saltzer, 1981). It should be noted that the observed effects were with adults (as opposed to students) responding to a scenario. Therefore, effects may be *stronger* in actual organizational settings (Park, 2005). These findings also hold managerial implications.

Managerial Implications

For supervisors dealing with budgeting systems, transparency with respect to managerial reporting might be a key in mitigating the negative effects of peer influence on employee budgetary slack creation. Note that we employed a relatively “soft” manipulation for peer influence in that one peer merely discloses the use of slack in their reports. Although the scenario incorporates mundane realism and our subjects were adults and not students, we expect the influence of peers to be *stronger* in actual work environments where peers might use persuasion to influence one another more actively. Thus, reporting transparency, where a subset of employees share reports that do not incorporate slack could have positive effects which mitigate some individual’s slack creation. Although, caveats are associated with transparency as this approach could backfire if employees create slack and its effects appear to be asymmetric with greater effects observed for transparency on dishonesty than honesty (Brunner & Ostermaier, 2019). Of course, codes of conduct can be used to shape employee behavior. However, as noted by in the ethical literature, mere existence of codes without enforcement and incentivization does not translate into observed effects on ethical behavior (Kish-Gephart et al., 2010).

With respect to the ethical ideology of relativism, employee assessments incorporating relativism during the selection process might be one way to address managerial candidates that are high on relativism in subsequent training sessions. Combining measures of relativism with assessments of other personality traits as risk tolerance and conscientiousness (Kish-Gephart et al., 2010) can be used as the basis of designing

more customized workshops that can specifically raise awareness of how these aspects relate to slack creation.

Further, as a means of addressing relativism and risk tolerance effects, some training modules could be individually oriented with an emphasis on personal control. Exposure to a range of approaches and practices along with creating multiple budgets accompanied with developmental feedback is likely to increase perceived control which can help mitigate budget variability for high relativism and low risk tolerant employees. Focusing attention on larger deviations for these individuals can bring awareness to their tendency to create dysfunctional slack. The development of specific implementation plans which help solidify intentions have shown to be effective in positively impacting individual-level behavior change (Webb & Sheeran, 2006).

Beyond individually oriented training, group-level training with employees from the same department that are provided with information for improving prior and current forecast accuracy could also prove useful. Source credibility of training facilitators would be an important consideration in addressing information processing associated with uncertainty (Shiu et al., 2011). In addition, reinforcing the significance of more disciplined budgeting as important to the organization and how an effective and efficient organization can provide tangible and intangible benefits to the group could help mitigate budgeting slack creation and foster relational and group cohesion dynamics for individuals higher on relativism and lower on risk tolerance. Note that focusing on relational cohesion and support could also help employees cope with the anxiety associated with higher uncertainty budgeting contexts.

Limitations

As with any study employing cross-sectional, single source data collection, results should be interpreted with these limitations in mind. However, it should be noted that common methods variance is not likely to account for interaction effects, a focus of this study, and in fact if common methods variance is present, the effects of moderation are likely to be even *more substantial* than observed (Siemsen, Roth, & Oliveira, 2010). Further, although single-item measures of peer influence and intention are employed in research, multi-item measures to assess these constructs can also be developed. On a related point, the temporal stability of intentions has been found to impact the intention-behavior relationship (Sheeran, Orbell, & Trafimow, 1999). Extensions of the present study could employ longitudinal designs to examine intention-behavior consistency over time. Our sample consists of working professionals from a mix of industries representing the United States. Future research could replicate and extend the generalizability of the present research in other countries for which aspects of potentially relevant cultural differences vary in comparison to the United States.

As highlighted in the introduction budgeting is a foundational organizational process with participative budgeting among the most widely used approaches for budget determination. Participatory budgeting is linked to budgeting slack with individual-level moral and control issues inherent to the process. This has led to the need to examine more nuanced relationships in ethical and volitional models of behavior. The present

study integrates relevant literature and uniquely demonstrates that peer influence, relativism, intention to create slack, and risk tolerance interact to influence budgetary slack creation. In conclusion, present findings point to the value of exploring the combined influence of individual differences (relativism and risk tolerance) with task-specific variables (peer influence and forecast uncertainty) to better understand individual-level budgeting behavior in organizations.

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