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**Abstract.** The budgetary slack has been studied extensively in the management and accounting literature, but results are inconclusive. This could be because the research has focused on economic factors rather than on psychological variables, such as trust. This paper tries to contrast psychological and economic causes in the creation of budgetary slack. Particularly, we examine whether a higher amount of subordinates' trust in their superiors with an economic incentive helps to reduce the tendency of subordinates to create budgetary slack. This study is based on a laboratory experiment conducted with 240 managers in order to investigate how trust, understood as a psychological and moral factor, contributes toward the reduction of slack in the absence and presence of pecuniary incentives. Subjects were divided into three groups: managers, executives and controller. Results support partially our hypotheses. This paper shows that non-monetary incentives could help managers to reduce budgetary slack in organizations.

Keywords: budgetary slack, trust, monetary and non-monetary incentives.

# 1 Introduction

The existence of slack leads harmful consequences for companies like lost business opportunities and/or inflated costs. The word "slack" is used to describe a circumstance in which the resources and effort employed in the development of an activity no longer contribute to the achievement of organizational objectives (Cyert and March, 1963). The budgetary slack has been studied extensively in the management and accounting literature. However, the results obtained are not concluding about the source of this slack and the way to reduce it (Fisher et al., 2007). One possible explanation for this is that experimental research has focused primarily on testing theory-based economic models, with no reference to the various psychological, social, and institutional issues that contribute to the behavior of slack in practice (Covalenski et al., 2003).

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The goal of this paper is to develop new theories that integrate behavioral and economic factors, and thus we treat together a psychological factor (trust) and an economic factor (economic incentives).

The current dominant economic view of slack is based on agency models. Agency models theorize that providing agents (subordinates) with more information than principals (supervisors) need not result in greater efficiency; the reason for this is that agents may use this information to shirk. Assuming an agency perspective, numerous experimental studies have studied the effects of risk aversion, information asymmetry, and pay schemes on budgetary slack; the goal of this research is to understand the incentives that promote honesty in agents (e.g. Chow et al., 1988) and if the incentives that promote honesty are not in conflict with economic incentives. Recent experiments incorporate social, institutional, ethical, and psychological factors, under the assumption that they also influence agents' decisions about slack. Social pressure, identification with a group, personal integrity, and aversion to lying are examples of non-economic factors that can affect budgetary slack and an agent's level of effort. In this line, the seminal experiment of Young (1985) provides evidence that risk-averse subjects create more slack than non-risk averse subjects. In the absence of information asymmetry, social pressure to reveal truthful information mitigates the amount of slack. The experiment of Young et al. (1993) suggests that cooperativeness is a relevant factor. Although cooperativeness among subjects does not necessarily result in less slack than internal competition, it has an incremental effect. Evans et al. (2001) observe in their laboratory that subjects are prepared to surrender some payoff for reporting honestly, or honestly in part. This finding contradicts the assumption in experiments that firms can achieve honest reporting if they pay enough for it, i.e., the revelation principle. In addition, the experiment of Stevens (2002) indicates that ethical concerns are negatively correlated with slack under a slack-inducing pay scheme, and independent of information asymmetry. Hannan et al (2006) observe in their experiment that subjects are willing to sacrifice the benefits of misrepresentation for being (appearing) honest because they prefer to create a positive impression. Brügen and Moers (2007) find that ethical concerns and social incentives, stated as individual and social norms, respectively, mutually reinforce the behavior of subjects and mitigate agency problems.

In summary, results in prior experiments suggest that subjects with no economic incentives to cooperate (because they are paid with slack-inducing schemes) nonetheless reduce the amount of slack in the laboratory, and as a consequence their wealth. Not only do subjects create less budgetary slack than expected, but in addition honesty can prevail in the absence of pecuniary incentives. In other words, the introduction of explicit monetary incentives may weaken non-pecuniary incentives. The experiment conducted by Rankin et al. (2005) disentangles the preference for honesty from other non-pecuniary preferences, demonstrating that subjects who have final budget authority significantly prefer honesty. In addition, the slack generated in this experiment was less than the theory predicted.

# 2 Hypotheses development

Trust can be defined as the willingness of one party (trustor) to be vulnerable to the actions of another party based on the expectation that the other will perform in the way that trustor expect (Mayer et al. 1995). We can also characterize trust as the "undertaking of a risky course of action on the confident expectation that all persons involved in the action will act competently and dutifully" (Lewis & Weigert 1985). Similarly, Robinson (1996) defined trust as a person's expectations, assumptions, or beliefs about the likelihood that another's future actions will be beneficial, favorable, or at least not detrimental to one's interests. An important number of economic and accounting laboratory experiments have applied the trust game, which aims to determine how much cooperation develops among individuals when they may possibly gain from it. In these experiments subjects exhibit substantial trust and reciprocity (e.g. Berg et al., 1995; Fehr and Gächter, 1998; Evans al., 2001). These experiments see trust as a rational decision. However, trust does not always operate like the element of calculated risk that is ubiquitous in economic models. Trust is also seen by managers as a predilection to assume the best when interpreting another's motives, regardless of economic incentives (Coletti et al., 2005; Kramer, 1999; Uzzi, 1997). Hence, we view trust as a psychological and moral issue. This approach differs from the previous rational view, where trust arises in games when the economic incentives favor cooperative behavior. Furthermore, trust encompasses several different levels: trust, no trust, and distrust. Trust and distrust lie at the extremes of a continuum. While trust is based on confidence in another, distrust refers to the concern that another may act to do harm.

In summary, we expect that in the laboratory: a) subjects who distrust or don't trust but are economically encouraged, are prone to decrease slack; b) subjects who distrust or don't trust but are not economically encouraged, are prone to ever-increasing slack; c) subjects who trust but are economically encouraged, submit budgets with higher slack; and d) subjects who trust but are not economically encouraged, submit budgets with low slack. Thus, we formulate the following hypothesis:

*Hypothesis 1:* Subjects who trust in their superiors and are not economically encouraged choose budgets with less slack than subjects who evidence distrust or "no trust" and are economically encouraged.

The manipulation of the level of trust in the laboratory should have consequences for subjects' choice of budgetary slack. When suspicion about superiors arises, budgetary slack should increase. This results from the fact that trust is formed over time (Rousseau et al., 1998).

It is always feasible to move managers from their initial positions along the continuum of trust-distrust because trust is an induced mind-set. Trust is a non-personality factor, susceptible to change when individuals interact in laboratory experiments. Thus, an individual can change his or her level of trust (or mistrust) while attempting to solve a problem (Rowe, 2004; Zand, 1972). Trust can then be altered both with and without economic incentives (Zand, 1972). In particular, we are interested in the effects on slack that result from altering trust in the presence and absence of economic implications. Having established a level of trust with another person, a perception that trust is one-sided leads to some diminution. When individuals begin to doubt that another person is operating in good faith, they manifest suspicion. Suspicion, in turn, results in a loss of trust. Similarly, individuals begin to distrust when they anticipate violations of trust in the future. The thought that unfulfilled expectations in one interpersonal exchange are likely to manifest in all other exchanges leads to distrust. Distrust emerges through negative expectations, assumptions, or beliefs about others' motives. Recurring abuses further increase distrust (Jones and George, 1998; Sitkin and Roth, 1993).

*Hypothesis 2:* A reduction in trust generates an increase in slack, independently of the presence and absence of economic incentives.

# **3** Experimental Design

The laboratory experiment employed a 5 (trust-slack levels) x 3 (information asymmetries on trust and slack) factorial design. We randomly assigned 240 participants to the roles of 30 executives, 90 managers, and 120 controllers, and in 30 groups (see Figure 1).

#### Fig. 1. Research experimental design



In order to design our experiment, we based on a previous one. That experiment tried to check if subjects who trust in their superiors choose budgets with less slack than subjects who evidence no trust or distrust without any monetary incentives. It was recruited a total of 240 businesspersons enrolled in postgraduate business courses to participate in an experiment about the effect of trust on budgetary slack. Subjects were pseudo-volunteers, as the experiment was part of a class assignment. The subjects did not receive payment for their participation in this experiment. Businesspersons were invited to participate in the experiment as a means of improving their knowledge of the budgetary process, consistent with the notion that classroom experiments have pedagogical value (Friedman and Sunder, 1988). The average managerial experience of a participant was 3.57 years. The percentages of males and females in the sample were 68% and 32%, respectively. 48% of the participants were currently dealing with budgets in their professional activities, while all of the subjects had experience dealing with budgets at some time.

The experiment consisted of a simulation study of a business game, where participants were assigned simulation tasks (DeJong et al., 1985; Lombardo and McCall, 1982). It was replicated a corporation: namely, the travel agency of an international holding company, whose primary business activity was tourism. The laboratory experiment employed a 5 (trust-slack levels) x 3 (information asymmetries on trust and slack) factorial design. It was randomly assigned 240 participants to the roles of 30 executives, 90 managers, and 120 controllers, and in 30 groups, where different combinations of trust and slack were present. Groups were of five types: high trust-very low slack, group 5; low trust-low slack, group 4; no trust-medium slack, group 3; low distrust-high slack group, group 2; and high distrust-very high slack, group 1. Each group was composed of three managers (production, marketing, and finance), one executive, and four controllers.

It was verbally informed participants regarding the general purpose of the experiment, the resource and information endowment, the set of actions available to them, and the moral and economic consequences of each action (Friedman and Sunder, 1988). Participants also received private written instructions, which they were not allowed to reveal at any time during the experiment. It was also provided all participants with written information about the nature of the budgets under discussion. In particular, they knew the global profitability underlying each budget: a) 5.35% (budget 1), b) 5.78% (budget 2), c) 6.31% (budget 3), d) 6.68% (budget 4), and, e) 7.09% (budget 5). Nonetheless, only subjects in the roles of managers knew the amount of budgetary slack, as they were told privately that 7.10% was the maximum attainable global profitability. The amounts of slack were 0.01% (budget 5), 0.42% (budget 2), 0.79% (budget 3), 1.32% (budget 2) and, 1.75% (budget 1). Thus, they were aware of the slack associated with each budget.

#### 3.1 Variables Measurement

The endogenous variables are: the first budget proposed, which represents the earliest manifestation of slack (V1), and the final budget, which is the last manifestation of slack (V2) (Fisher et al., 2000, 2002). The exogenous variable group (V3) refers to the five types of groups. The five groups are based on the participation of the managers in previous conditions of high distrust-very high slack (group 1), low distrust-high slack (group 2), no trust-medium slack (group 3), low trust-low slack (group 4), and high trust-very low slack (group 5). As soon as the meeting was completed, we questioned all the participants about their evaluation of the final level of trust executives had in managers (V4). Final trust was measured from 1 (high distrust) to 5 (high trust).

Both executives and controllers were uninformed about slack conditions and the amount of slack. Hence, to identify how aware executives and controllers were of slack during discussion of the budget, they were asked about the effort that managers invested in their last budget proposal. A variable based on effort was built, which varies from 1 (very easy to attain) to 5 (required their maximum effort) (V5). It was also checked if executives and controllers were conscious of: a) managers' success in submitting budgets easily attainable (V6); b) if budgetary targets induce high managerial productivity (reverse code) (V7); c) if it was costly to manage budgets carefully (reverse code) (V8); and d) if they thought that budgets had motivated managers to be concerned with improving efficiency (V9). Executives' and controllers' responses were on a scale from 1 (definitely true) to 7 (definitely false). With regard to trust, executives gleaned some indirect information through the level of cooperation, whereas controllers knew nothing. To differentiate between these two situations, a binary control variable that we denote as the absence of information on trust was defined (V10); this provides a value of one for controllers and zero for executives. We also control for gender differences (V11), professional experience (years in the workplace as a manager) (V12), and previous knowledge of budgets (V13).

### 4 Results

To test our hypotheses, a multinomial logit model was specified (Hosmer and Lemeshow, 1989; Menard, 2002). The initial budget is the dependent variable; the group and control variables comprise the independent variables. The initial budget is the response variable in five categories. Four equations were derived. Each of the four equations comprises a multinomial logistic regression comparing the other budgets with budget 1 (slack=1.75%). The multinomial logistic regression model takes the form:

$$P(y_k = 1/\beta_k, x) = \exp(\beta_{kT} \cdot x) / \sum \exp(\beta_{kT} \cdot x), \qquad (1)$$

Where y is the class indicator for the *k*th budget; x is the predictor vector extended by one to be paired with the intercept parameter. Each  $\beta k$  is a vector of parameters,

one for each class (the letter T means total). The initial budgets diverge. Subjects in the role of managers start the budgetary meeting with budget 3 (amount of slack: 0.79%) 28.9% of the time, followed by budget 1 (slack: 1.75%) 24.4% of the time, and budget 2 (slack: 1.32%) 21.1% of the time. Budgets 4 (slack: 0.42%) and 5 (slack: 0.01%) are chosen less frequently, 12.2% and 13.3% of the time, respectively. A Wald test permitted appraising the significance of the individual logistic regression coefficients for the variable group (V4) and the insignificance of the control variables (Table 3). Using the Wald statistic, group is significant with the exception of Budget 2. Likelihood ratio tests also corroborate the significance of group and the insignificance of the control variables (see Table 1).

The odds ratio, Exp (B), in Table 1 shows that as group increases by one unit, the odds ratios of budget 3 (slack= 0.79%), budget 4 (slack= 6.68%), and budget 5 (slack= 0.01%) increase by multiples of 4.05, 5.14, and 2.43, respectively, once the variables for sex (V11), years at work (V12), and budget experience (V13) were controlled. Thus, the parameter estimates confirm that when one-time prior conditions of subjects move from distrust-high slack to trust-low slack, the probability of a subject submitting initial budgets with low slack (0.42%), medium slack (0.79%), and very low slack (0.01%) increases. This result confirms, to some extent, Hypothesis 1: Subjects who previously trust create less slack than managers who distrust, i.e., they intend to invest more effort. We cannot show, however, that subjects who evidence low distrust in their superiors produce more (or less) sack than he ones who evidence high distrust.

Panel A: Paramete	r Estimates							
Initial Proposal of Budget by Manag- ers	Independent variables		В	Std. error	Wald	D .f.	Sig.	Exp (B)
Budget 2 (Slack= 1.32%)	Intercept		_ 0.086	0.985	0.008	1	0.930	
	Group	V3	0.117	0.303	0.149	1	0.699	1.124
	Sex	V1 1	0.080	0.696	0.013	1	0.908	1.083
	Years at work	V1 2	_ 0.162	0.137	1.396	1	0.237	0.851
	Budget experier	ice V1 3	0.418	0.739	0.320	1	0.572	1.519
Budget 3 (Slack=0.79%)	Intercept		_ 4.620	1.372	11.330	1	0.001	
	Group	V3	1.399	0.356	15.430	1	0.000	4.051
	Sex	V1 1	_ 0.249	0.733	0.115	1	0.734	0.780

 Table 1. Initial Proposals of Budgets by Managers: Parameter Estimates and Likelihood Ratio

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	Years at work	V1 2	0.040	0.122	0.106	1	0.745	1.041
	Budget experience	V1 3	1.515	0.758	3.996	1	0.046	4.550
Budget 4 (Slack=0.42%)	Intercept		_ 6.737	1.925	12.246	1	0.000	
, , , , , , , , , , , , , , , , , , ,	Group	V3	1.637	0.462	12.558	1	0.000	5.141
	Sex	V1 1	_ 0.482	0.911	0.280	1	0.597	0.618
	Years at work	V1 2	0.059	0.142	0.175	1	0.676	1.061
	Budget experience	V1 3	2.198	0.953	5.317	1	0.021	9.005
Budget 5 (Slack=0.01%)	Intercept		_ 4.738	10.593	8.844	1	0.003	
, , , , , , , , , , , , , , , , , , ,	Group	V3	0.888	0.377	5.562	1	0.018	2.430
	Sex	V1 1	1.003	0.973	1.062	1	0.303	2.726
	Years at work	V1 2	0.048	0.132	0.132	1	0.717	1.049
	Budget experience	V1 3	1.819	0.856	4.520	1	0.034	6.165
Panel B: Likelihood	d Ratio Tests							
	Effect		<ul> <li>–2 log likelihood of reduced model</li> </ul>		Chi-squa	are	D.f.	Sig.
	Intercept		24	6.767	34.360		4	0.000
	Group	V3	24	7.445	35.038	3	4	0.000
	Sex	V1 1	215.213		2.806		4	0.591
	Years at work	V1 2	21	5.176	2.769		4	0.597
	Budget experience	V1 3	22	21.381	8.974		4	0.062

The chi-square statistic is the difference in -2 log likelihoods between the final model and the reduced model. The reduced model is formed by omitting a variable from the final model. The null hypothesis is that all parameters of the effect are zero

A different multinomial logit model for closing budgets was constructed. Final budget is the dependent variable with five categories generating four equations. Each of the four equations is a binary logistic regression that contrasts other budgets with Budget 1 (very high slack). Multinomial logistic regression simultaneously estimates the four logits.

Final budgets show some discrepancy. A greater number of subjects (32.2%) finish the budgetary meeting agreeing to budget 3 (slack=0.79%). Smaller numbers of

managers decide on other budgets: 14.4% are inclined to close the meeting with budget 1 (slack=0.79%), 20.0% with budget 2 (Slack=1.32%), 18.9% with budget 4 (slack=1.32%), and 14.4% with budget 5 (slack=0.01%). It was found that the amount of slack in final budgets is less than in initial budgets. Therefore, disagreement appears to reduce slack on average. 57 subjects adhere to their opening budget proposals, however, while 33 subjects change their final proposal from the opening offer. Using the Wald statistic, group (V3) is significant with the exception of budget 2 (Table 2), and as well as in the likelihood ratio tests (Table2). The odds ratio, Exp (B), bears out the preceding outcome. A one unit increase in group, i.e., subjects moving towards early high-trust and low-slack, brings about an increase of 1.998 in the odds ratio of budget 3 (slack=0.79%), and 2.152 in the odds ratio of budget 4 (slack=0.42%). The odds of budget 2 (slack=1.32%) and budget 5 (slack=0.01%) as final proposals by subjects in meetings, however, are not significantly explained by the initial group.

 Table 2. Final Proposals of Budgets by Managers: Parameter Estimates and Likelihood Ratio

 Tests

Panel A: Paramet	er Est	imates							
Final Proposal	of	Independent variables		В	Std. error	Wald	D.	Sig.	Exp (B)
Budget by Managers							f.		
Budget 2		Intercept		3.252	1.600	4.132	1	0.042	
(Slack= 1.32%)		Group	V3	-0.057	0.333	0.030	1	0.864	0.944
		Final trust	V4	-0.918	0.414	4.904	1	0.027	0.399
		Sex	V11	-0.058	0.856	0.005	1	0.946	0.944
		Years at work	V12	0.098	0.143	0.466	1	0.495	1.102
		Budget experience	V13	-0.606	0.808	0.562	1	0.453	0.545
Budget 3		Intercept		1.392	1.478	0.887	1	0.346	
(Slack=0.79%)		Group	V3	0.692	0.306	5.125	1	0.024	1.998
		Final trust	V4	-0.711	0.403	3.115	1	0.078	0.491
		Sex	V11	-0.389	0.772	0.254	1	0.614	0.678
		Years at work	V12	0.067	0.130	0.268	1	0.605	1.070
		Budget experience	V13	-0.639	0.737	0.752	1	0.386	0.528
Budget 4		Intercept		1.714	1.634	1.100	1	0.294	
(Slack=0.42%)		Group	V3	0.767	0.357	4.601	1	0.032	2.152
		Final trust	V4	-0.952	0.446	4.562	1	0.033	0.386
		Sex	V11	-0.360	0.837	0.185	1	0.667	0.697
		Years at work	V12	-0.143	0.178	0.649	1	0.420	0.866
		Budget experience	V13	0.010	0.820	0.000	1	0.990	1.010
Budget 5		Intercept		-1.311	1.775	0.545	1	0.460	
(Slack=0.01%)		Group	V3	0.480	0.339	2.013	1	0.156	1.617
		Final trust	V4	-0.320	0.456	0.491	1	0.483	0.726
		Sex	V11	0.932	1.023	0.831	1	0.362	2.541
		Years at work	V12	0.100	0.136	0.545	1	0.460	1.105

E	Budget experience	V13	-0.177	0.841	0.045	1	0.833	0.837
Panel B: Likelihood Ratio	Tests							
E	Effect		-2 log likelihood of re-		Chi-square		D.f.	Sig.
			duced	l model				
I	ntercept		2	53.165	11.485		4	0.022
(	Group	V3	2	53.461	11.780		4	0.019
F	Final trust	V4	2	49.810	8.130		4	0.087
S	Sex	V11	2	44.551	2.871		4	0.580
,	Years at work	V12	2	45.542	3.862		4	0.425
E	Budget experience	V13	2	43.354	1.674		4	0.795
The chi-square statistic is	the difference in -2 log	g likelihoo	ds between	the final model a	nd the reduced	d model	. The reduced	d model is

formed by omitting a variable from the final model. The null hypothesis is that all parameters of the effect are zero

The Wald test also indicates that final trust (V4) explains the odds ratios of final budgets 2 and 4 (Table 2). The likelihood ratio tests, however, do not strongly support the significance of final trust (Table 2). If the ending trust increases by one unit (towards high trust), the odds ratios of budget 2 (slack=1.32%) and budget 4 (slack=0.42%) are less than one. Further units of final trust generate a reduction of 0.399 in the odds ratio of Budget 2, and 0.386 in the odds ratio of Budget 3 (Table 2). Accordingly, once final trust increases, the probability that subjects propose low and medium slack final budgets, instead of budgets with the maximum slack, is less. The exception is the odds ratio for budget 5, which is found to be insignificant. These findings validate to some extent Hypothesis 2: By taking into consideration the fact that final trust produces consequences for subjects' slack choices, follow-on slack is greater than before as one introduces suspicion. The initial trust and slack conditions, however, are determinants for most managers. For example, 57 managers do not adjust their original budget suggestions.

### 5 Discussion and Conclusions

The experiment shows that trust, understood as a moral and psychological factor, ameliorates the problem of slack in the absence of any explicit link between trust preferences and the distribution of wealth (as recommended by Rankin et al., 2005). The existence of subjects' distrust of their superiors stimulates higher levels of slack.

The budgets initially and finally proposed by subjects in the role of managers contain less slack than expected, which is consistent with previous findings that indicate that subjects tend to produce less budgetary slack than agency theory predicts (e.g. Stevens, 2002). The results also show that prior conditions of trust and slack facilitate the understanding of subjects' preferences for proposing initial budgets. This explains the likelihood of budgets with medium, low, and very low slack, but not budgets with high slack. An incremental effect on subjects' honesty, i.e., a reduction in slack, was found related to trust in a budgetary setting in which the superior has the final authority over budget approval. That seems to contradict the previous finding of Rankin et al. (2005) that suggests that there is no incremental effect on honesty when

a superior has final authority over budget approval, while the opposite occurs when subordinates dictate the budget. Trust maybe acts as a moderator, positively motivating subjects to honesty when superiors dictate budgets. The trust levels on subjects in the role of managers were manipulated by introducing suspicion. Nevertheless, most of subjects held to their initial budgetary choices throughout the meeting. This finding demonstrates the weight of initial conditions of trust and slack in budgetary settings. In particular, the significance of the preceding trust-slack interaction in a trustlow slack environment, as preferences for medium and low slack budgets over very high slack budgets were moderated by group discussion.

Several subjects in the role of managers adjusted their budgetary choice. As soon as their final trust moved from distrust towards trust, subjects modified their budgets and thus their slack. In response, most subjects decided to reduce, rather than increase, slack. When suspicion appeared in the budgetary setting, and the managers' final trust shifted from a position of distrust to trust, the possibility that managers chose budgets with high, medium, and low slack, instead of very high slack, diminished as the final conditions depended more on trust. This is a key finding: Budgetary slack levels decrease in trust settings, even in the absence of any direct pecuniary incentive. This finding is relevant for management accounting researchers as trust, understood as a psychological and moral factor, has a positive effect on the amount of slack. But we ask: budgetary slack levels decrease more (in trust settings) in the presence of monetary incentive? Or conversely budgetary slack levels decrease less? We try to design an experiment that answers these questions.

### 6 References

- 1. Berg, J, Dickhaut, J. and K. McCabe, 1995, Trust, reciprocity, and social norms, *Games and Economic Behavior* 10 (1), 122-142.
- Brüggen, A. and F. Moers, 2007, The role of financial incentives and social incentives in multi-task settings, Journal of Management Accounting Research; 2007 19, 25-50.
- Chow, C. W., Cooper, J. C., and W. S. Waller, 1988, Participative budgeting: Effects of a truth-inducing pay scheme and information asymmetry on slack and performances, The Accounting Review 63 (1), 111–122.
- Coletti, A. L., Sedatole, K. L., and K. L. Towry, 2005, The effect of control systems on trust and cooperation in collaborative environments, *The Accounting Review* 80 (2), 477– 500.
- Covaleski, M. A., Evans III, J. H., Luft, J. L., and M. D. Shields, 2003, Budgeting research: Three theoretical perspectives and criteria for selective integration, *Journal of Management Accounting Research* 15, pp. 3-49.
- 6. Cyert, R. M. and J. G. March, 1963, *A behavioral theory of the firm* (Prentice-Hall, Englewood Cliffs, NJ).
- DeJong, D. V., Forsythe, R., Lundholm, R.J., and W. C. Uecker, 1985, A laboratory investigation of the moral hazard problem in an agency relationship, *Journal of Accounting Research* 23 (Supplement), 81-120.
- 8. Evans, J. H., Hannan, R. L., Krishnan, R., and D. V. Moser, 2001, Honesty in managerial reporting, *The Accounting Review* 76 (4), 537–559.

- Fehr, E. and Gächter, S., 1998, How effective are trust-and reciprocity-based incentives?, in A. Ben-Ner and L. Putterman, eds., *Economics, values, and organization* (Cambridge University Press, United Kingdom) 337–363.
- 10. Fisher, J. G., Frederickson, J. R., and S. A. Peffer, 2000, Budgeting: An experimental investigation of the effects of negotiation, *The Accounting Review* 75 (1), 93–114.
- Fisher, J. G., Frederickson, J. R., and S. A. Peffer, 2002, The effect of information asymmetry on negotiated budgets: An empirical investigation, *Accounting, Organizations and Society* 27 (1–2), 27–43.
- Fisher, J. G., Sprinkle, G. B., and L. Walker, 2007, Experimental Budgeting Research: Implications for Practitioners, *The Journal of Corporate Accounting & Finance* 18 (6), 67–75.
- Friedman, D., and S. Sunder, 1994, *Experimental methods. A primer for economist* (Cambridge University Press, Cambridge: NY).
- Hannan, R., Rankin, F., Towry, K., Salterio, S., and A. Webb, 2006, The effect of information systems on honesty in managerial reporting: A behavioral perspective, Contemporary Accounting Research 23 (4), 885-932.
- 15. Hosmer D. W., Lemeshow S. Applied Logistic Regression. New York: Wiley 1989.
- 16. Jones, J. R. and J. M. George, 1998, The experience and evolution of trust: Implications for cooperation and teamwork, *Academy of Management Journal* 23 (3), 531–546.
- 17. Kramer, R. M., 1999, Trust and distrust in organizations: Emerging perspectives, enduring questions, *Annual Review of Psychology* 50 (1), 569–598.
- 18. Lewis JD, Weigert A. 1985. Trust as a social reality. Soc. Forces 63:967-85
- Lombardo, M. M. and M. W. McCall, 1982, Leaders on line: observations from a simulation of managerial work, in J. G. Hunt, U. Sekaran, and C. A. Schriesheimn (eds.), *Leadership Beyond Established Views* (Southern Illinois University PresS: Carbondale), 50-67.
- Mayer., R. C., Davis, J. H., and F. D. Schoorman, 1995, An integrative model of organizational trust, *The Academy of Management Review* 20(3), 709-734.
- 21. Rankin, F. W., S. Schwartz, and R. Young, 2005, The effect of honesty preferences and superior authority on budget proposals, *Working Paper*.
- 22. Robinson, Sandra L, 1996, Trust and breach of the psychological contract, Administrative Science Quarterly 41. 4: 574-599.
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., and C. Camerer, 1998, Not so different after all: A cross-discipline view of trust, *Academy of Management Journal* 23 (3), 393–404.
- 24. Rowe, C., 2004, The effect of accounting report structure and team structure on performance in cross-functional teams, *The Accounting Review* 79(4): 1153-1180.
- 25. Sitkin, S. and N. Roth, 1993, Explaining the limited effectiveness of legalistic remedies for trust/distrust, *Organization Science* 4 (3), 367–392.
- Stevens, D. E., 2002, The effects of reputation and ethics on budgetary slack, *Journal of Management Accounting Research* 14, 153-171.
- 27. Uzzi, B., 1997, Social structure and competition in interfirm networks: The paradox of embeddedness, *Administrative Science Quarterly* 42(1), 35-67.
- 28. Young, S. M., 1985, Participative budgeting: The effects of risk aversion and asymmetric information on budgetary slack, Journal of Accounting Research 23 (2), 829–842.
- 29. Zand, D. E., 1972, Trust and managerial problem solving, *Administrative Science Quarterly* 17 (2), 229–239.