

**Advances in Business-Related Scientific Research Conference 2011 in Olbia
(ABSRC 2011)
September 7-9, 2011, Olbia, Italy**

**PSYCHOLOGICAL ASPECTS OF BUDGETING:
PLANNING FALLACIES, FAILURES AND FLAWS EXPLAINED BY
SOCIAL PSYCHOLOGY**

Zehetner, Karl (*)

PEF Private University for Management Vienna
Austria

karlzehetner@res.co.at

Steinkellner, Peter

PEF Private University for Management Vienna
Austria

peter.steinkellner@wirtschaftscoaching.info

Czerny, Elfriede

PEF Private University for Management Vienna
Austria

elfriede.czerny@karriere-erfolg.at

Abstract:

Behavioral accounting includes psychological findings into accounting theory to anticipate information recipients' behavior – it deals with the question of how to design the accounting system to persuade recipients to make economically reasonable decisions.

So what about the psychological aspects of the behavior of the deliverers of accounting information? A common area of failure in accounting is budgeting. Typical judgment errors in the budgeting process are psychologically constituted, which is not adequately picked up as a central theme in the rational-focused area of accounting.

Our main interest is, if frequently observed errors in budgeting can be avoided by considering research findings from social psychology. Using a simple explanatory model, we display unfavorable budgeting situations as vignettes, explain them by commonly accepted findings of social psychology, and deduce implications for budgeting practice.

Keywords: Psychological aspects of budgeting, Behavioral accounting, Budgeting errors.

Topic Groups: Managerial and organizational cognition and psychology, Organizations and financing.

1. INTRODUCTION

Budgeting practice, as it is performed in organizations and taught in business schools, primarily rests upon the assumption of rationality, which is considered to be the basis for managerial power and legitimacy (Cunliff, 2009). The research field of behavioral accounting includes psychological as well as sociological findings into accounting theory to anticipate information recipients' behavior – it deals with the question of how to design the accounting system to persuade recipients to make economically reasonable decisions. Regarding budgeting, behavioral accounting includes phenomena of participative (e.g. bottom-up) budgeting like budgetary slack into budgeting theory. Slack means that managers use their information advantage to estimate costs higher and sales lower than realistic and thus influence budgets into a direction where they are more likely to meet them with less risk or with less effort. While including sociological as well as psychological factors and theories on motivation into this theoretical approach, it is still based on the assumption of rationality: Making it easier to meet the budget will not lead to maximum value for the organization, but it may be rational for a manager to maximize self-interest.

There are indications in psychology and management sciences that raise doubts in rationality. Simon (1955) created the term of “bounded rationality”, which means that in reality we rationally adjust because we work within constraints such as imperfect information that make perfect rationality impossible. Birnberg et al. (2007) subsume that cognitive, motivation, and social psychology theories rely (at least implicitly) on this assumption of bounded rationality, that is, the assumption that individuals intend to behave perfectly rationally but often do not behave perfectly rationally because of their limited cognitive processing capacity.

The behavioral accounting approach ignores that besides self-interest there are other reasons that lead to planning fallacies, failures and flaws – reasons that are constituted on social psychological effects. They can lead to slack, but also to far too ambitious budgets (and, consequently, to inadequate risks). Some psychological factors may also impede or even block the meeting of budgets and hence make the budgets retrospectively “false”.

Effects that can be explained by psychology have been experimentally researched. Young (1985) found that – not surprisingly – risk aversion positively correlates with the amount of slack that is incorporated into the budget by the manager, and that the perception of social pressure reduces slack. Stevens (2002) found that slack significantly decreases with the intensity of the manager's ethical concerns as well as his reputation considerations. In some cases group phenomena were subject to experiments. Fischer et al. (2002) found that slack is only half as big, if the manager determines the budget without negotiation, compared to the amount that results when he has the final decision after negotiations with a superior. Obviously in this setting ethical aspects become less important than strategic aspects of negotiation. These experiments however only examine isolated effects without integrating the systematic of social psychology. Also, most experiments concentrate on the role of the subordinated decider and widely fade out the role of the superordinated organizational unit (Arnold, 2007).

Papers that integrate a wider range of social and cognition psychology theory into accounting are rare. Those who do, like Birnberg et al. (2007), discuss these theories in the context of selected management accounting research.

2. METHOD

Our main interest is, if frequently observed errors in budgeting can be avoided, or if at least their negative consequences can be eased, by considering research findings from social

psychology. Taking into account that (social) psychological effects on information providers' behavior are less explored than (social) psychological implications on information recipients' behavior, our approach is to begin with discussing this context on a *phenomenon level*, rather than on a theory level. We use a simple explanatory model by classifying social psychological findings into three classes. We then illustrate characteristic budgeting situations (in particular situations that usually lead to problems) with statements that persons who are involved in budgeting processes will recall as typical. Finally, we give possible explanations for these unfavorable situations by commonly accepted findings of social psychology, and deduce implications for budgeting practice.

3. BUDGETING PROBLEMS – THEORIES, VIGNETTES AND IMPLICATIONS

Social psychology is the scientific field that seeks to understand the nature and causes of individual behavior and thought in social situations (Baron et al., 2006). As the budgeting process constitutes such a social situation, we assume that social psychology can contribute to the understanding of effects on budgeting that are rooted in the behavior and thought of individuals who are involved in this process. Among other tasks, social psychology explores how we evaluate the social world and how our actions are influenced by it. Following a commonly accepted systematic (e.g. Baron et al., 2006) we distinguish between two systems for evaluating various aspects of the social world: one that operates in an automatic manner and one that operates in a systematic and controlled manner. Budgeting is a process that is administered by groups – often in meetings – so an important social influence is related to group phenomena. Hence we categorize research findings from social psychology that may help to explain budgeting problems into three classes: 1) automatic processes in cognition (schemas and heuristics), 2) controlled processes in cognition (attribution and bias), and 3) group influence. The paper concludes with a discussion of the implications both for budgeting practice and budgeting research.

3.1 Automatic Processes in Cognition

The first of two systems for evaluating various aspects of the social world works in an automated manner. These cognitive processes include schemas and heuristics.

3.1.1 Commonly accepted theories

Schemas are mental frameworks for organizing and using social information. They help us to cope with our limited cognitive capacity by reducing the effort we have to expend on social cognition (Baron et al., 2006). Every individual has developed self-schemas as well as sets of schemas for persons, roles, and events (Fiske & Taylor, 1991). For example, students (as well as professors) have an idea of how to behave in an exam situation (*event scheme*), and they have expectations on the behavior of professors (or students, respectively) (*role scheme*). Schemas help us to categorize complex situations quickly and efficiently. Unfortunately, once they are formed, they are often very resistant to change, even in the face of contradictory information (Baron et al., 2006). Moreover there is empirical evidence that they are self-confirming (e.g. Rosenthal & Jacobsen, 1968), an effect that is called *self-fulfilling prophecy*.

Heuristics are strategies to deal with information overload by providing quick and simple ways of judging, that lead to reasonably accurate results most of the time (Baron et al., 2006). *Availability* is one of these strategies: The easier we can remember a certain situation, the

more likely we consider it important and typical. In an experiment Schwarz et al. (1991) showed, that even the number of events to remember influence the considered significance.

Persons, who were asked to describe either six or twelve examples of very assertive behaviors in which they had engaged, subsequently rated their own assertiveness differently: As it is easy to remember six, but very difficult to remember more than ten situations, people who had to remember six assertive behavior situations showed a much higher appraisal of their assertiveness than those who had to remember twelve. The contrary effect occurred, if the probands were asked to remember either six or twelve examples of unassertive behavior.

Anchoring and adjustment is a heuristic that involves the tendency to make estimations by starting from an initial value that is adjusted to yield the final answer. The initial value may be suggested by the formulation of the problem, or it may be the result of a partial computation (Tversky & Kahneman, 1974). Anchoring and adjustment can be also found in situations that do not involve values or numbers. For instance, we often allow our personal experiences to serve as an anchor for our views, even if we know our experiences are unique or unusual (Baron et al., 2006).

Psychologists have found biases in social cognition that in certain situations might lead to wrong judgments. For example, individuals tend to pay more attention to negative than to positive information (*negativity bias*). On the other hand, most individuals believe that they are more likely to experience positive events (*optimistic bias*) (Baron et al., 1996). *Counterfactual thinking* is the label that psychologist have given to the finding that we all have the tendency to imagine other outcomes in a situation than the ones that actually occurred. Counterfactual thinking can cause us to experience strong regret over missed opportunities and thus block us mentally from working on new opportunities.

3.1.2 Vignettes displaying schemas and heuristics

Schema:

- “The biggest speed bump in the budgeting process is cost center planning. Actualizing the master data needs three meetings at least. Then usually the allocation design does not fit any more. There is absolutely no understanding for the structural needs of our SAP system. We are always chasing after something or someone”.
- “The CEO has cost discussions with the project managers every month; he has also hired an external consultant. The focus always is on cost variances, although the real dangers are in other topics, like the valuation of work in process of our long-term projects. He insists in absolute accuracy in cost planning”.

Self-fulfilling prophecy:

- CEO: “The production department usually overestimates the manufacturing costs. They like to prepare for a rough ride. We can reduce their estimates”.

Availability heuristic:

- “I just had an unpleasant conversation with the CEO, because we are so far off the budget. I am afraid we will not cope with it next quarter anyway”.
- “We discussed last year’s performance. I should list ten examples of successful sales negotiations. I felt like on a hot seat. I think we will have the same troubles next year”.

Anchoring and adjustment heuristic:

- Board member: “I think the calculated return on investment of 8.5% is weigh too low, we should readjust our budget to achieve 9.2 or better 9.3%”. (Before the meeting, she had planned to claim 11%)”.
- “The last controller was said to be a lame duck. Now the parent company sends us another one. I think nothing of these people, they are walking overheads”.

Counterfactual thinking:

- Recurring topic in the group: “We would have made it, if the financial crisis hadn’t cropped up“ – „Right, and if our biggest customer had not been taken over by the XY group, so that he had to switch to the group supplier”.

3.1.3 Implications for budgeting practice

Changing schemas is difficult, they often persist even in the face of disconfirming information, and they exert self-confirming effects (Baron et al., 2006). In budgeting practice, complaints about the inflexibility of ERP systems are notorious. We assume that the main reason for that is schematic thinking: The sequence of the budgeting processes is influenced by the software and thus forms a scheme of how budgeting works. Consequently, forces may be concentrated on minor matters. A possible corrective may be the creation of a simple system for budgeting that skips the details but emphasizes the most important parameters and thus establishes a new scheme. One of the strongest and most surprising experiences in one author’s consulting practice is the striking effect of replacing the ERP system by a simple spreadsheet in the first budget meetings on the attitude towards budgeting – basically a psychological rather than a methodological effect. A particular problem mainly in German-speaking countries is the emphasis on cost center planning, which is caused by accounting traditions (dual accounting system, period accounting). These traditions facilitate a more detailed control of indirect costs, but then lead to a scheme that seduces managers to (over-) emphasize detailed localization of indirect costs also in budgeting, which again concentrates attention on a side show.

The mechanism of a self-fulfilling prophecy is displayed in the third example above. The CEO’s suspiciousness leads to a correction of the budget data to the production department’s disadvantage. Consequently, the managers of this department discover that it is important to prepare for tough budget discussions with the CEO, and the best way is to incorporate slack by overestimating the costs, so that after the correction reasonable figures come out. An atmosphere of trust encourages accurate estimates and therefore should be aspired. Incentive systems focusing on target achievement could trigger undesirable behavior and therefore need to be developed with caution.

Reporting performance, no matter if poor or good, should be temporally separated from budgeting to avoid an availability heuristic effect. If unfavorable (or favorable) variances have to be explained in temporal proximity to budgeting, a tendency to cautious (or risky, respectively) budget inputs is a threat. To avoid the anchoring and adjustment heuristic effect it might be helpful to prepare a meeting with a written document that contains the significant values to be suggested.

While counterfactual thinking can have some positive effects like determination to do better in the future (Baron et al., 2006), it might also occupy managers mentally and block them from working on new opportunities. One study (Baron, 2000) shows that engaging in counterfactual thinking was reported significantly less by entrepreneurs than by non-entrepreneurs; entrepreneurs preferred to focus on the future and viewed thinking about

events that might have occurred as a waste of time. Assuming that entrepreneurial thinking is favorable for leading managers, it is obvious to consider counterfactual thinking as undesirable and, in case of repeated manifestations of counterfactual thinking in a team, to actively demand the direction of the team's attention to the future.

3.2. Controlled Processes in Cognition

The second system for evaluating various aspects of the social world works in a systematic and controlled manner. These cognitive processes include attribution.

3.2.1 Commonly accepted theories

Attribution is the process through which we seek to identify the causes of others' behavior and so gain knowledge of their stable traits and dispositions. Psychologists found that there is a tendency to explain others' actions as stemming from dispositions, even in the presence of clear situational causes (Baron et al., 2006). This important finding is called *confirmation bias* (Jones, 1979) or *fundamental attribution error* (Ross, 1977). It is worth to be mentioned that this bias was found to be more important in individualistic (i. e. Western) cultures than in collectivistic (i. e. Eastern) cultures (Krull et al., 1999). Another attribution bias is the *self-serving bias* – the tendency to attribute positive outcomes to internal causes (one's own traits or characteristics) but negative outcomes or events to external (situational) causes (Baron et al., 1996). Ross et al. (1977) found in four studies that individuals tend to estimate their own preferences as relatively common and preferences differing from their own as relatively uncommon. This effect is labeled *false consensus effect*.

3.2.2 Vignettes displaying attribution and bias

Fundamental attribution error:

- “The manufacturing guys don't take the budgeting process seriously. They are always late at meetings, if they appear at all. On principle, they are never prepared”.

Self serving bias:

- “In the current year we are so far behind the budget that we will definitely not catch up any more. We have to analyze exactly how it came to this. No one could anticipate that two of our best salesmen would be head-hunted by our competitors with dirty tricks. Moreover, without doubt the budget was too far from reality, thanks to our accountants”.

False consensus effect:

- Sales department: “The accountants always look at the wrong figures. It's the sales that make the profit, not the costs”. Accounting department: “The sales guys have no cost awareness. When addressed on the topic they always argue that it's the sales that make the profit, not the costs”.

3.2.3 Implications for budgeting practice

Fighting erroneous attributions is difficult. Studies show that even if we know that other persons' behavior or opinion have situational (external) causes we tend to attribute a dispositional (internal) cause to their behavior or opinion (e.g. Jones & Harris, 1967). The effect even occurs when observers know that they themselves are the cause of the observed

person's behavior (Gilbert & Jones, 1986). Despite these limitations it still seems plausible that raising awareness of the attribution biases (e.g. by integrating fundamentals in social psychology into management education, Steinkellner et al., 2010) may reduce their negative effects. The antagonism between sales and accounting departments is so common that there are many anecdotes about it. Events that provoke attribution biases and thus may lead to frictions shall be avoided. Scheduling meetings without conforming to the time-limitations of all parties is a good example for provoking such an event.

3.3 Group Influences on Budgeting Quality

Budgeting is a process that is administered by groups, so an important social influence is related to group phenomena.

3.3.1 Commonly accepted theories

In his famous line experiments Asch (1951) showed, that individuals tend to agree to other individuals' judgments, even if it is obvious that they are wrong, a finding that clearly shows the enormous force of *social pressure to conformity*. Group think is defined as the tendency of the members of highly cohesive groups to assume that their decisions can't be wrong, that all members must support the groups' decisions strongly, and that information contrary to these decisions should be ignored (Janis, 1972, 1982, Baron et al., 2006)

Group polarization is the label for the phenomenon, that group members' pre-existing tendencies are enhanced in the group. When a rather homogenous group discusses a topic, the opinion of the group members often merges into a more extreme one, strengthening the members' average tendency (Myers et al., 2010). For example, if the average opinion before the discussion is in favor of taking risk, the result of the group discussion will likely be even more risk tolerant than before.

Darley & Latané (1968) experimentally found that in case of an emergency, like an epileptic seizure, the probability that the affected person is helped decreases with increasing number of bystanders, a finding that was labeled *diffusion of responsibility* by the authors.

3.3.2 Vignettes displaying group phenomena

Conformity and groupthink:

- “Well, all things considered, I think I agree with the previous speakers. Sales will probably go up. Not by any stretch of the imagination I can follow the gloomy prophecies of the market research guys”.

Group polarization:

- “Our discussion more and more confirms my initial opinion: We should not be scared to death by the risks, but seize at the chances”.

Diffusion of responsibility:

- Board of directors: “.....” (Everyone remaining silent, although the organization faces irresponsibly increasing risks).

3.3.3 Implications for budgeting practice

The first statement is a good example for ineffective decision making caused by both, *conformity* as a yield to social pressure – the other group members showed optimism on the sales forecast – as well as *groupthink* – caveats of outsiders are ignored. Research addressing the groupthink problem has disclosed a few approaches to overcome these pitfalls, for example assigning a devil’s advocate to the group, whose task is to disagree and criticize any plan or consideration; another, even more promising, approach is to build authentic dissent into the group by assigning individuals with different initial opinions (Myers et al., 2010). The suggestions to overcome groupthink strongly support the concept of budget meetings involving managers from all relevant departments of the organization. We suggest building up awareness for group effects like groupthink or group polarization on the quality of budget decisions by integrating basics in social psychology into management education. Limiting the number of deciders (including the most senior functions, e.g. board members) is an effective method to reduce responsibility diffusion.

4. CONCLUSION AND IMPLICATIONS FOR BUDGETING RESEARCH AND PRACTICE

We want to close with a critical reflection of the limitations of this work. There is as a reasonable amount of research on how management accounting practices influence individuals’ heuristic information search and use, and on how management accounting practices affect bias in heuristic judgments and decisions (Birnberg et al., 2007). This paper pursues the question, to what extent management accountants’ practices themselves are affected by (social) psychological effects, in particular which fallacies, failures and flaws are to be expected from this reason.

The paper explores these effects on a phenomenon level, using a simple explanation model: We display typical undesirable budgeting situations and suggest explanations for these phenomena by psychology theories. This is an important limitation of this paper and can only be a first step. Future research shall develop a theory that includes non-rational factors in management accounting research to make it more lifelike.

The paper attempts to contribute to management accounting practice by serving as a thought-provoking impulse, triggering critical self-reflection in accounting practitioners: How is our own exposure to psychologically founded biases and judgment errors and to group influence? Its purpose is also to be an initiation for management science to focus research not only on psychological effects of management accounting practices on accounting information recipients, but also on psychological aspects of the behavior of accounting information deliverers.

REFERENCES

- Arnold, M. C. (2007). Experimentelle Forschung in der Budgetierung – Lügen, nichts als Lügen? *Journal für Betriebswirtschaft*, 57, 69-99.
- Asch, S. E. (1951). Effects of group pressure upon the modification and distortion of judgment. In Guetzkow, H. (Ed.), *Groups, Leadership and Men*. Pittsburgh, PA: Carnegie, 177-190.
- Baron, R. A. (2000). Counterfactual thinking and venture formation: The potential effects of thinking about “What might have been”, *Journal of Business Venturing*, 15, 79-92

- Baron, R. A., Byrne, D. & Branscombe, N. A. (2006). *Social Psychology, 11th ed.* Boston: Person.
- Birnberg, J. G., Luft, J. & Shields, M. D. (2007). Psychology theory in management accounting research. In Chapman, C. S., Hopwood, A. G., & Shields, M. D. (Eds.), *Handbook of Management Accounting Research*, Oxford: Elsevier, 113-136.
- Cunliff, A. L. (2009). *A Very Short, Fairly Interesting and Reasonably Cheap Book About Management*. London: Sage.
- Darley, J. M. & Latané, B. (1968). Bystander interventions in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology*, 8 (4), 377-383.
- Fischer, J. G., Frederickson, J. R. & Pfeffer, S. A. (2002). Budgeting: An experimental investigation of the effects of negotiation. *The Accounting Review*, 75, 93-114.
- Fiske, S. T. & Taylor, S. E. (1991). *Social cognition. 2nd ed.* London: McGraw-Hill.
- Gilbert, D. T. & Jones, E. E. (1986). Perceiver-induced constraint: Interpretations of self-generated reality. *Journal of Personality and Social Psychology*, 50, 269-280.
- Janis, I. L. (1972). *Victims of Groupthink*. Boston: Houghton Mifflin.
- Janis, I. L. (1982). *Victims of Groupthink, 2nd ed.* Boston: Houghton Mifflin.
- Jones, E. E. & Harris, V. A. (1967). The attribution of attitudes. *Journal of Experimental Social Psychology*, 3, 2-24.
- Jones, E. E. (1979). The rocky road from acts to dispositions. *American Psychologist*, 34 (2), 107-117.
- Krull, D. S., Loy, M. H., Lin, J., Wang, C., Chen, S. & Zaho, X. (1999). The fundamental attribution error: Correspondence bias in individualist and collectivist cultures. *Personality and Social Psychology Bulletin*, 25, 1208-1219.
- Myers, D., Abell, J., Kolstad, A. & Sani, F. (2010). *Social Psychology. European edition*. London: McGraw-Hill.
- Rosenthal, R. & Jacobson, L. (1968). *Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development*. New York, NY: Holt, Rinehart & Winston
- Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. Berkowitz, L. (Ed.), *Advances in Social Psychology*. New York: Academic Press.
- Ross, L., Greene, D. & House, P. (1977). The false consensus effect: An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology*, 13 (3), 279-301.
- Schwarz, N., Bless, H., Strack, F., Klumpp, G., Rittenauer-Schattka, H. & Simons, A. (1991). Ease of retrieval as information: Another look at the availability heuristic. *Journal of Personality and Social Psychology*, 61 (2), 195-202.
- Simon, H. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics*, 69, 99-118.
- Steinkellner, P., Zehetner, K. & Czerny, E. (2010). The contribution of psychological entrepreneurship research for management education. M/O/T International Conference on Management Learning, Vienna.

Stevens, D. E. (2002). The effects of reputation and ethics on budgetary slack. *Journal of Management Accounting Research*, 14, 153-171.

Tversky, A. & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. Biases in judgments reveal some heuristics of thinking under uncertainty. *Science*, 185, 1124-1131.

Young, S. M. (1985): Participative budgeting: The effects of risk aversion and asymmetric information on budgetary slack. *Journal of Accounting Research*, 23, 829-842.