



Haaga-Helia

Budgetary Slack Creation and Control Methods: A Literature Review

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Abstract

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Budgetary slack refers to the practice of understating revenues and/or overstating costs in a budget to make budgeted targets easier to achieve.

This thesis synthesizes 65 peer-reviewed research papers on budgetary slack and qualitatively discusses the factors affecting its creation and the methods to control it. Information on the root causes of budgetary slack and its various control methods can help companies improve their budgeting process and decrease budgeting slack, therefore enabling more effective use of company resources.

Findings indicate that budgetary slack is primarily researched through surveys and experiments, mainly using managers and students as samples, respectively. Furthermore, findings indicate that the circumstances under which budgetary slack occurs are complex, and the factors are strongly interwoven. This thesis proposes a model of the various factors affecting its creation. The importance of slack control primarily depends on the company's strategy, but factors such as the type of costs and the operating environment should also be considered.

Keywords

Budgetary slack creation, budgetary slack control, budget gaming

Table of contents

1	Introduction.....	1
1.1	Background.....	1
1.2	Research Question.....	1
1.3	Demarcation.....	2
1.4	International Aspect.....	2
1.5	Benefits.....	2
1.6	Key Concepts.....	3
2	Theoretical Framework.....	4
2.1	Overview of budgeting.....	4
2.2	Budget based performance evaluation.....	6
2.3	Budgetary slack.....	7
2.4	Models related to budgetary slack and its control.....	8
2.5	Business strategies.....	10
3	Research Methods.....	12
3.1	Research method and analysis.....	12
3.2	Sampling.....	13
3.3	Article classification.....	15
4	Research results and findings.....	16
4.1	IQ1. Budgetary slack as a research topic.....	16
4.2	IQ2. Findings from literature.....	18
4.2.1	Information asymmetry.....	18
4.2.2	Participative budgeting.....	19
4.2.3	Budget emphasis and pressure.....	21
4.2.4	Organizational commitment.....	21
4.2.5	Pay scheme.....	22
4.2.6	Personal factors.....	23
4.2.7	Interpersonal factors.....	25
4.2.8	Other factors.....	26
4.3	IQ3. Controlling budgetary slack creation.....	27
4.4	IQ4. Company strategy, industry, location, and type considerations.....	30
5	Conclusions.....	31
5.1	Key findings.....	31
5.2	Personal learning.....	33

1 Introduction

This is a research type bachelor's thesis for the Degree Programme in International business in the major specialization of Financial Management, taught at Haaga-Helia University of Applied Sciences. In this chapter, first the background and need for this research are discussed. Then the goal, outcomes, and investigative questions are defined, and the topic demarcated. Lastly, the benefits are listed, and the relevant key concepts are defined.

1.1 Background

Budgetary slack is the practice of understating revenues and/or overstating costs in a budget to make budgeted targets easier to achieve (Horngren, Datar & Rajan 2015, 240). It frequently occurs if budget variances are used in performance evaluations (Horngren & al. 2015, 240). Some of the disadvantages of budgeting include promoting gamesmanship, rewarding managers who set modest goals and penalizing those who set goals that are too ambitious, and risking a budget being padded (Shim, Siegel & Shim 2011). However, research into budgetary slack creation is fragmented, and at times even contradictory, and research into how it can be controlled is limited.

This topic was chosen because gaming and dysfunctional behavior are among the top 12 weaknesses of traditional budgeting (Neely, Bourne & Adams 2003). In addition, misrepresenting one's true potential to gain an advantage, also known as sandbagging, was reported to be among the top two most frequent budget gaming behaviors (Libby & Lindsay 2010). Furthermore, gaming negatively impacts long-term performance and decreases the value of the budget (Libby & Lindsay 2010). Therefore controlling budget gaming behaviors would lead to better performance and higher value from the budget.

1.2 Research Question

This thesis aims to study past literature on budgetary slack to develop a comprehensive understanding of its causes and how it can be controlled within companies. This thesis also studies how budgetary slack has been studied over the year and aims to analyze what may have caused differences in the results of the research papers. Lastly, gaps in research will be identified, which will be used to make recommendations for further research.

The research question (RQ) is phrased as: What has prior research determined about the factors and effective control methods of budgetary slack?

It can be divided into the following investigative questions (IQ):

IQ 1. How has budgetary slack creation been studied in literature?

IQ 2. What factors affect budgetary slack creation?

IQ 3. What control methods have been proposed in literature?

IQ 4. What specific control methods are suited for different types of companies?

The overlay matrix presents the investigative questions at a glance. It also includes which parts of the theoretical framework relate to each investigative question, what research methods are used to answer them, and in which chapter the results will be discussed.

Table 1. Overlay matrix

Investigative question	Theoretical Framework	Research Methods	Results (chapter)
IQ 1. How has budgetary slack creation been studied in literature?		Observation of journals	4.1
IQ 2. What factors affect budgetary slack creation?	Categorization of factors	Secondary data from journals	4.2
IQ 3. What control methods have been proposed in literature?	Compromise triangle	Secondary data from journals	4.3
IQ 4. What specific control methods are suited for different types of companies?	Differences in budgeting processes, company strategy	Secondary data from journals	4.4

1.3 Demarcation

This thesis analyzes English-language peer-reviewed empirical studies that focus on the behavioral aspects of budgetary slack and the conditions that enable its creation and management. Studies that focus entirely on the public sector are excluded due to the differences in the budgeting process between the public and private sector, such as the regulatory limitations to the decision making of public sector budgets (Rajala & Tammi 2014, 31-36).

1.4 International Aspect

Budgeting is universally used and plays an important role in the planning and control of operations for all kinds of companies. Likewise, budgetary slack affects companies globally. The articles included in this literature review also originate from various countries, and the impact of national culture is briefly touched upon.

1.5 Benefits

For the specialization of account and finance, this thesis provides a detailed overview of the studies done to understand budgetary slack creation and its control, as well as proposes a model about the factors affecting its creation.

For the companies that want to decrease the amount of slack in the budget, this thesis may provide valuable information on the root causes of budgetary slack as well as its various control methods. Implementing budgetary slack control methods can help companies improve their budgeting process and decrease budgeting slack, allowing them to use funds more effectively and become more profitable.

This topic also includes aspects that would help with my career, as I would like to work in positions that aim towards improving performance, profitability, predictions, and planning. I am also highly interested in studying human behavior in business contexts; thus, sandbagging and the factors driving an employee to introduce slack into the budget are fascinating topics.

1.6 Key Concepts

Budgeting is a management accounting tool where short-term business plans are created, and the revenues and expenses related to those plans are controlled. (Braun & Tietz 2015, 521; Atrill & McLaney 2018, 194) They are mainly expressed in financial terms. (Atrill & McLaney 2018, 194)

Budgetary slack is the practice of understating revenues and/or overstating costs in a budget to make budgeted targets easier to achieve (Horngren & al. 2015, 240).

Sandbagging means when someone misrepresents their true potential to gain an advantage (Merriam-Webster s.a). In budgeting, it often occurs when budget variances are used for performance evaluation (Horngren & al. 2015, 240).

2 Theoretical Framework

This chapter will begin by giving an overview of the budgeting process in different kinds of companies. Next, the use of budgets in performance evaluation is discussed and the concept of budgetary slack and its disadvantages are introduced. Next, contributions to the theory of budgetary slack and the categorization of its factors will be discussed. Lastly, two classifications of company strategy are summarized, as a company's strategy affects the impact of budgetary slack.

2.1 Overview of budgeting

This section starts by describing the purpose of a budget in companies and then discusses the different types of budgets and budgeting methods used by companies. Limitations of a traditional budgeting process will also be included.

Budgeting is an ongoing cycle used for planning, directing, and controlling operations (Braun & Tietz 2015, 521-524). It is one of the most commonly used accounting tools for organizational planning and control. For example, a survey by Wijewardena and De Zoysa (1999) found that budgets are considered the most important management accounting tool in Australia and the third most important in Japan. Furthermore, a survey by Ahmad, Sulaiman and Alwi (2003) found that budgets are used for planning and control to a large extent in Malaysian companies. A survey conducted by Szychta (2002) found that 80% of Polish companies included in the sample prepare annual operating budgets for the entire enterprise, with the remaining 20% who did not prepare them primarily consisted mainly of small and medium commercial and service companies, as well as state-owned manufacturing companies.

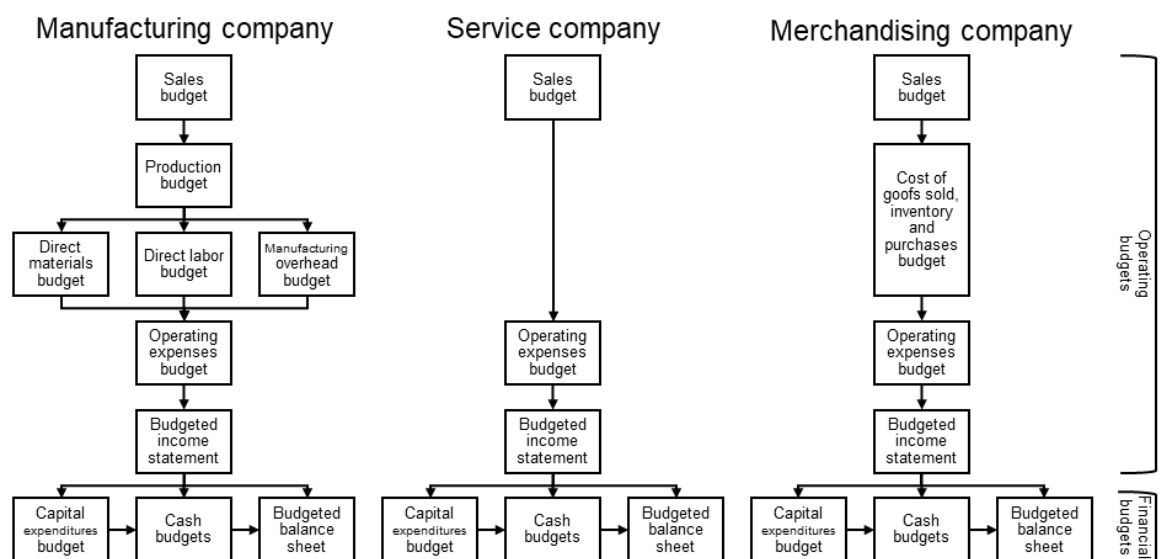


Figure 1. Master budgets for manufacturing, service, and merchandising companies (Braun & Tietz 2015).

As figure 1 shows, the master budget consists of different parts depending on whether a company is a manufacturing company, a service company, or a merchandising company. After the sales budget, a manufacturing company will create a production budget that determines how many units will need to be produced. After the production budget, a manufacturing company will create direct materials, direct labor, and manufacturing overhead budgets, which determine how much is needed to meet the production budget. The remaining two operating budgets are the operating expenses budget and the budgeted income statement. These two steps are the same for all three company types. After the operating budgets are made, the financial budgets are prepared. They include the capital expenditure budget, the cash budgets, and the budgeted balance sheet. (Braun & Tietz 2015).

In practice, all companies will not prepare all budgets corresponding to their type of business. For example, about 17% of Polish businesses surveyed by Szychta (2002) prepare a full set of operating and financial budgets. The remaining companies who do annual budgeting prepare at least two or three operating budgets.

The traditional budgeting process emerged in the 1920s as “a tool for managing costs and cash flows in large industrial organizations” (Hope & Fraser 2003). Libby and Lindsay (2003) define it as operating within a top-down model, in which decisions, rewards and resources flow down, and information flows up. The traditional model has been criticized for various reasons. A list of the 12 most frequently criticized aspects was collected by Neely, Bourne and Adams (2003), and they are as follows:

Competitive strategy:

- budgets are rarely strategically focused and are often contradictory
- budgets concentrate on cost reduction and not on value creation
- budgets constrain responsiveness and flexibility, and are often a barrier to change
- budgets add little value - they tend to be bureaucratic and discourage creative thinking.

Business process:

- budgets are time consuming and costly to put together
- budgets are developed and updated too infrequently - usually annually
- budgets are based on unsupported assumptions and guesswork
- budgets encourage gaming and perverse (dysfunctional) behavior.

Organizational capability:

- budgets strengthen vertical command and control
 - budgets do not reflect the emerging network structures that organizations are adopting
 - budgets reinforce departmental barriers rather than encourage knowledge sharing
 - budgets make people feel undervalued
- (Neely et al. 2003).

Budgeting can also be done with a bottom-up approach where many levels of management are included in the process (Braun & Tietz 2015, 521-524). It is also known as participative budgeting, and most companies use it to some degree (Braun & Tietz 2015,

521-524). Participative budgeting has been a topic of empirical research since the 1950s (Shields & Shields 1998). The literature review by Shields and Shields (1998) revealed that sharing information and coordinating independence were the most important reasons for involvement in participative budgeting. Other significant reasons include motivation, satisfaction, slack reduction, and work-related tension (Shields & Shields 1998).

According to a survey by Lalli (2012), 21% of respondents use a top-down approach to budgeting, 21% use a bottom-up approach, and 55% use a hybrid approach. Out of the ones using a hybrid approach, the budgeting is more often top-down than bottom-up. A hybrid approach is more common among companies with an annual revenue greater than 5 billion dollars. (Lalli 2012.)

Due to limitations of traditional budgeting, such as the 12 reasons listed by Neely et al. (2003), new approaches to budgeting have emerged, with the main ones being “better budgeting” and “beyond budgeting.” Neely et al. (2003) identified five principal approaches to better budgeting: activity-based budgeting, zero-based budgeting, value-based management, profit planning, and rolling budgets and forecasts. The other new approach is beyond budgeting, which emerged in the late 1990s. Central features of beyond budgeting are relative targets and rewards, rolling forecasts, distributed controls, flexible strategies, and internal market (Hope & Fraser 2000). An internal market refers to a situation in which “central services units see operating units as internal customers that must be serviced and satisfied” (Hope & Fraser 2000).

2.2 Budget based performance evaluation

The budget acts as a target that managers will strive to achieve and as a benchmark for evaluating performance (Braun & Tietz 2015, 521-524). In performance evaluation, the actual achieved revenues and expenses will be compared against their budgeted equivalents to gauge how well operations were controlled (Braun & Tietz 2015, 521-524). The survey of Malaysian of companies by Ahmad et al. (2003) found that 78% of managers involved in budgeting feel that using variances in judging managerial performance is above average importance or vitally important. In contrast, the percentage is 71% for companies from New Zealand and 67% of companies from the UK, as shown in a similar survey by Guilding, Lamminmaki and Drury (1998). Ahmad et al. (2003) also found that 68% of the Malaysian respondents believe top management should mainly assess performance based on budget attainment. The views were more divided in the New Zealand and the UK, with 42% of the New Zealand sample and 46% of the UK sample agreeing with the statement, and 44% of the New Zealand sample and 40% of the UK sample disagreeing with the statement (Guilding et al. 1998). Guilding et al. (1998) believe that the “Balanced Scorecard” philosophy by Kaplan and Norton may cause this difference, which also takes

into account the customer perspective, internal business perspective, and innovation and learning perspective, rather than only the financial perspective (Kaplan & Norton 1992).

2.3 Budgetary slack

Budgetary slack is the practice of understating revenues and/or overstating costs in a budget to make budgeted targets easier to achieve (Horngren & al. 2015, 240). Lukka (1982) describes budgetary slack as the difference between the budget of the subordinate and the maximum performance of the subordinate (Daumoser & al 2018). It is presented as part of theoretical slack, which is the difference between the maximum performance of the subordinate and the minimum performance accepted by the superior (Daumoser & al 2018). A precise amount of budgetary slack cannot be determined, as it would require having perfect knowledge of the maximum possible performance of the subordinates (Leavins, Omer & Vilutis 1995). However, models have been created for estimating it.

Budgets encouraging gaming and dysfunctional behavior are among the top 12 weaknesses of budgeting (Neely et al. 2003). A survey by Libby and Lindsay (2010) revealed sandbagging was among the two most frequent budget gaming behaviors, as 15% of Canadian and 26% US senior managers report that sandbagging occurs frequently, and 62% of Canadian and 60% of US senior managers report that it occurs occasionally. Libby and Lindsay (2010) also found that budget gaming and the negative effect on the long-run performance of the business unit were positively correlated and that budget gaming was negatively correlated with budget value. The results suggest that gaming negatively impacts long-term performance and decreases the value of the budget (Libby & Lindsay 2010). It frequently occurs if budget variances are used in performance evaluations (Horngren & al. 2015, 240).

2.4 Models related to budgetary slack and its control

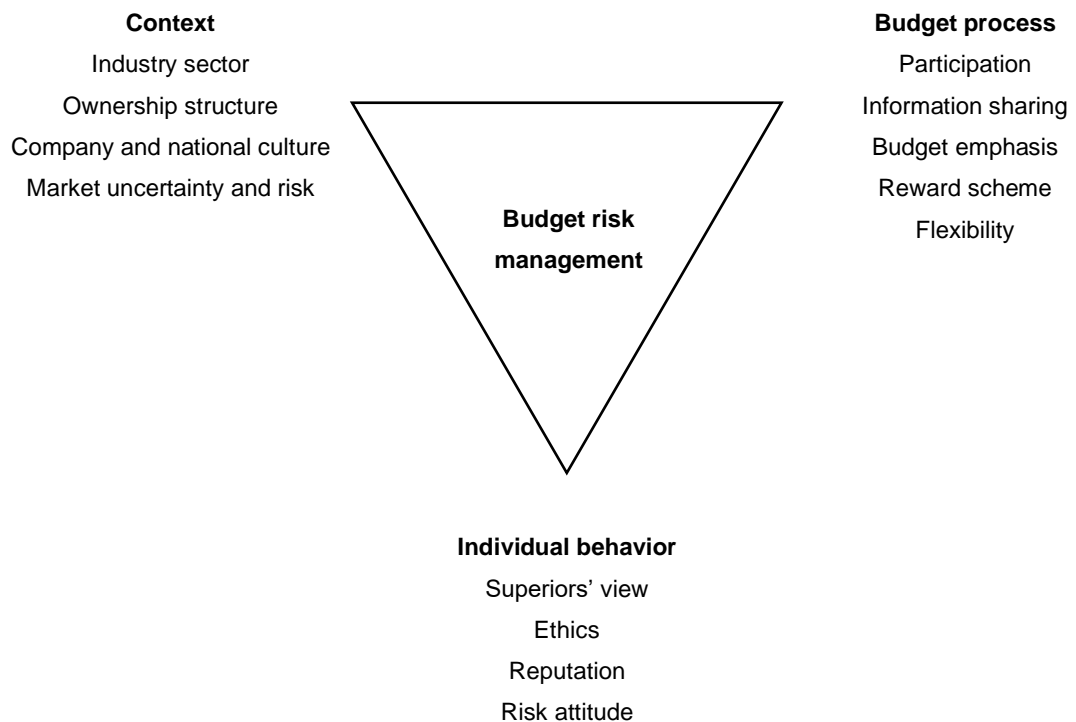


Figure 2. Budget risk management (Elmassri & Harris 2011).

Figure 2 presents different factors that affect budgetary slack creation, renamed to budget risk management, split into three main categories. The first category is related to the context and environment in which the budget is created and includes factors such as industry sector, company size, ownership structure, company and national culture as well as market uncertainty and risk. The second category includes factors in the budgeting process itself. For example, it includes the degree of lower-level management participation, information asymmetry, what is emphasized in the budget setting process, and the flexibility of the budget. Finally, the last category is individual behavior and includes factors like the superiors' perspective on budgetary slack, individual ethics, maintaining reputation by creating accurate budgets, and attitude towards risk. (Elmassri & Harris 2011.)

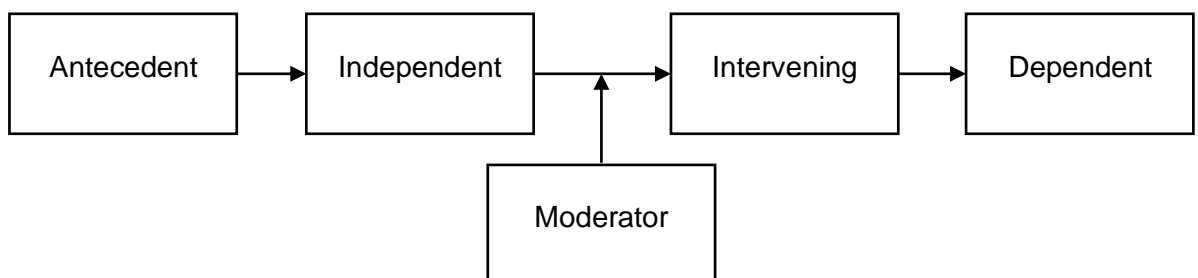


Figure 3. Analytical framework (Briers & Hirst, 1990)

An analytical model developed by Briers and Hirst (1990) can be used to classify the factors of budgetary slack, as demonstrated by Daumoser & al (2018). The model categorizes factors as antecedent, independent, moderating, intervening, and dependent factors. The relationships of these categories can be seen in figure 3. Antecedent factors are considered to have a causal influence on the emergence of an independent factor (Briers & Hirst, 1990), independent factors are hypothesized to cause changes in the dependent variable (Wilson, Keating & Beal 2016, 24), moderators affect the degree and form of the influence (Arnold, 1982), intervening factors are ones affected by the independent factors and have a causal effect on the dependent variable (Briers and Hirst, 1990). Lastly, dependent factors are variables affected by the other factors (Wilson, Keating & Beal 2016, 24).

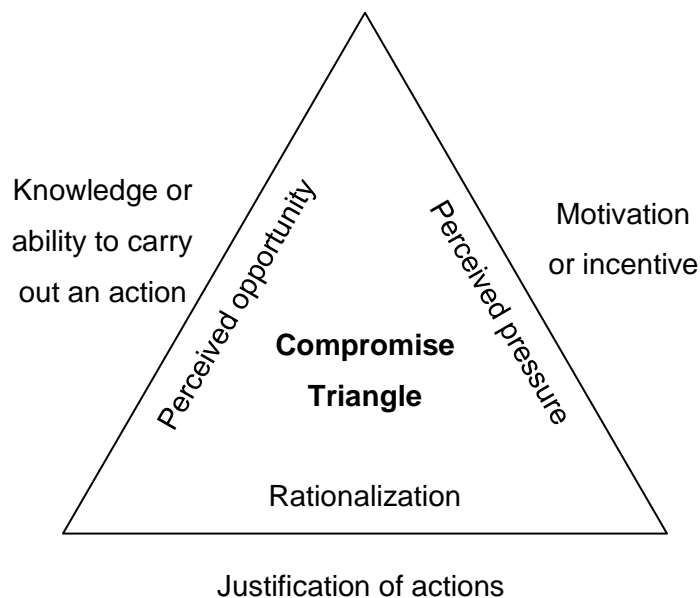


Figure 4. compromise triangle (Albrecht, Albrecht & Hawkins 2017).

Budgetary slack control could be presented in the form of a compromise triangle. This triangle is presented in figure 4 and can be used to understand why an individual might engage in unethical behavior (Albrecht, Albrecht & Hawkins 2017), which in this thesis refers to knowingly creating slack in order to mislead. It shows the three key aspects: perceived opportunity, perceived pressure, and rationalization. The opportunity to intentionally build slack comes from a high degree of participation or high degree of information asymmetry. A high degree of participation provides the means to build slack, whereas information asymmetry hinders detection. Perceived opportunity is the aspect that can most be affected by internal control systems. Perceived pressure, in this case, could be environmental uncertainty or the promise of a monetary incentive in case budgeted targets are exceeded. Lastly, rationalization means lines of thinking where someone justifies their actions. They are tied to a personal code of conduct and the rules and expectations from the environment (Albrecht, Albrecht & Hawkins 2017). In theory, removing or decreasing any

of these three aspects should have a decreasing effect on budgetary slack creation; hence it can be used when approaching the question of how to control budget slack creation.

2.5 Business strategies

A company's strategy affects budgetary slack's significance and control methods (Van der Stede 2000; Van der Stede 2001; Fuad, Daljono & Ratmono 2018). Therefore, this section will discuss two classifications of company strategy.

Miles and Snow (1978) classified business strategies into defenders, prospectors, and analyzers. A defender strategy is characterized by stability, which is achieved via operating in a narrow, strongly defended domain. The methods to defend the domain include, for example, competitive pricing or high-quality products. Defenders primarily aim to grow through market penetration while ignoring developments and trends outside their domain. The administrative goal in a defender strategy is to achieve strict control in order to ensure efficiency. This type of strategy is best suited for a stable industry, such as the food processing industry, with its relative lack of technological change compared to the electronics industry. The downside of a defender strategy is its lack of ability to respond to significant shifts in the market. (Miles & Snow 1978.)

A prospector strategy is characterized by a broad and developing domain. Prospectors find and exploit new product and market opportunities, with innovation and product development being central parts. Its technology and administrative systems need to be flexible, and the primary goal of the administration is to coordinate resources among decentralized units and projects. The main risk of a prospector strategy is low profitability and overextension of resources. Due to rapid response to change, a prospector strategy may be characterized by low efficiency. (Miles & Snow 1978.)

An analyzer strategy lies in between prospector and defender strategies. It is characterized by a stable base while still growing towards new domains proven to be viable. The main challenge of an analyzer strategy requires management to operate different planning, control, and reward systems simultaneously. If a balance between stability and flexibility is not maintained, inefficiency becomes a primary risk. (Miles & Snow 1978.)

		STRATEGIC ADVANTAGE	
		Uniqueness Perceived by the Customer	Low-Cost Po- sition
STRATEGIC TARGET	Industrywide	Differentiation	Overall Cost Leadership
	Particular seg- ment only	Focus	

Figure 5. Three generic strategies (Porter 1980).

Another categorization of strategies is Porter's (1980) generic competitive strategies. They include differentiation, cost leadership, and focus. They are summarized in figure 5. The first strategy is achieving overall cost leadership via tight cost and overhead control, the pursuit of cost reductions and minimizing costs in areas like R&D, service, sales force and advertising. Some advantages like high relative market share or favorable access to raw materials are often required to gain such a position. It may require a heavy up-front investment, but it provides high margins once the position has been achieved. (Porter 1980.)

The second generic strategy is differentiation. A differentiation strategy focuses on developing something that is perceived as unique and can be done via differentiation in brand image, technology, features, customer service, dealer network, or other dimensions. It may involve a trade-off with cost-effectiveness, as research, product design, high-quality materials, and intensive customer support are inherently costly. (Porter 1980.)

The final generic strategy focuses on a specific buyer group, a product line segment, or a geographic market. Its goal is to serve a specific market very well. A firm employing a focus strategy either has a low-cost position, a high degree of differentiation, or both. (Porter 1980.)

3 Research Methods

This chapter will define the research type, methods, and design, and the risks and potential sources of bias will be analyzed.

3.1 Research method and analysis

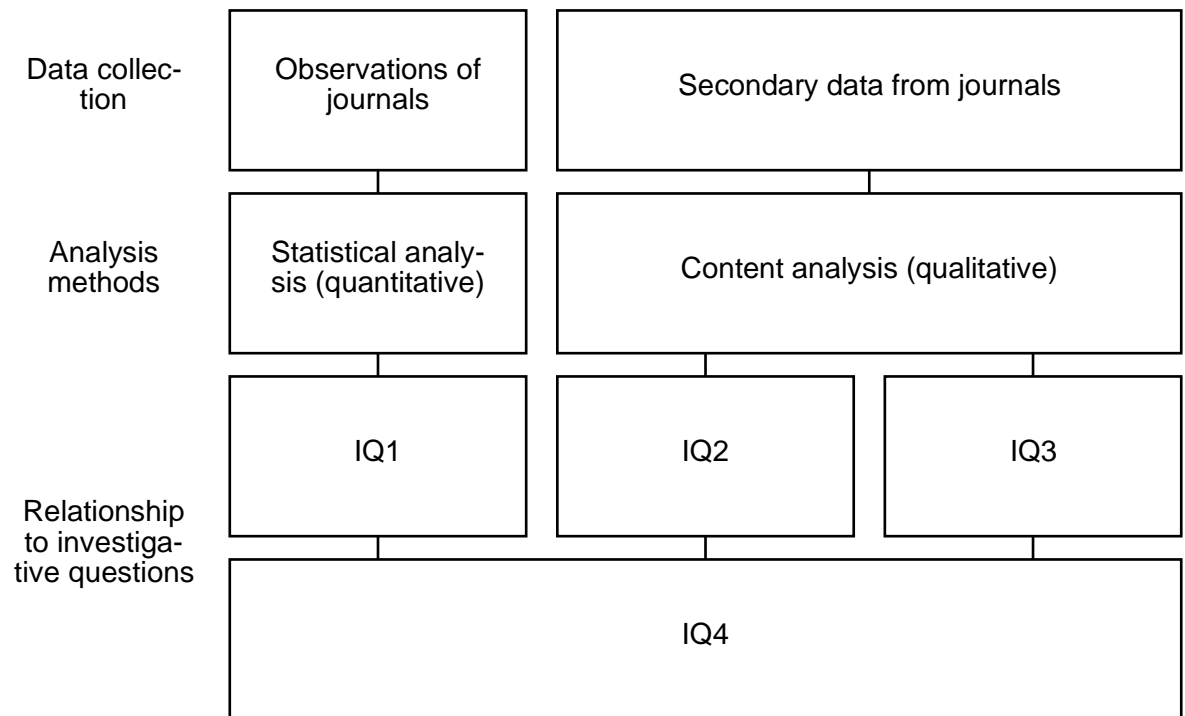


Figure 6. Research model

As seen in figure 6, the data collected is secondary data gathered from various journals in the fields of business, ethics, and psychology, as well as observational data about the characteristics of the journals.

For the first investigative question, the analysis method chosen is quantitative. The articles will be categorized based on their year of publication, research method, analysis method, sample size, field, journal, and topic. These results will then be analyzed statistically. The journals in which the articles are published will also be classified based on their SCImago Journal Rank (SJR) and VHB-JOURQUAL3 (JQ3) grade, which are explained more in-depth in section 3.2.

For the second and third investigative questions, the analysis method will be a qualitative content analysis. They will be integrative research reviews of budgetary slack literature with a goal to develop a connected and cohesive whole. An integrative approach was chosen because in areas of the research where results of the studies differ, it is important to understand how the methods may have shaped the outcome. When analyzing research

methods of individual articles, the key factors to analyze include sampling, method, potential sources of bias, and limitations identified by the author(s).

As figure 6 shows, once the factors shaping the research are identified and the results of the research papers are synthesized, the results of the first three investigative questions will be utilized to answer the fourth investigative question about how different companies can control budgetary slack.

3.2 Sampling

The articles used in the literature review are e-articles found from Haaga-Helia's library database through the article search. The search criteria were to find peer-reviewed articles with full text available that contain the words "budgetary slack" in the abstract. The search was conducted on February 2, 2021 and it returned 162 results. To minimize bias, the entire population of approximately 162 papers will be considered. Exclusions will be justified according to what was stated in the demarcation. A potential source of bias arises from the availability of information in the database and the specific term used as a search word.

The sample was reduced to 65 articles by first excluding 67 articles that were not in English, 19 articles that had the public sector as their primary focus, which is outside of the demarcation of this thesis, as well as five articles that did not concern budgetary slack. In addition, the full text was unable to be acquired for six papers; therefore, they will also be excluded due to not having access to their research methods and detailed findings, both of which are of primary interest in this paper. This demarcation process is summarized in table 2.

Table 2. Sampling.

Full results	162
Language other than English	67
Primary focus on public sector	19
Does not contribute to budgetary slack research	5
Full text not available	6
Final sample	65

Table 3 shows the journals that the articles were published in, followed by their SCImago Journal Rank (SJR) 2019 indicator and their VHB-JOURQUAL3 (JQ3) grade, as well as the number of articles included in the sample from each journal. The SJR indicator measures the transfer of prestige from one journal to another by measuring the average

number of citations weighted by the SJR indicator of the referencing journal (Scimago Research Group 2007). VHB-JOURQUAL3 is an indicator from 2014 by the German Academic Association of Business Research (VHB) that measures the scientific quality of a journal based on its advancement of business administration as a scientific discipline (VHB 2019a). A+ is given to excellent and global leading journals; A is given to leading journals; B is given to important and notable journals; and C is given to renowned journals (VHB 2019b).

Table 3. The journals in which the articles were published and their ranks (Scimago 2019; VHB 2014).

Journal name	SJR 2019	JQ3	Number of articles
Abacus	0,45	B	1
Academy Of Accounting And Financial Studies Journal	0,18	-	1
Accounting And Business Research	0,86	B	2
Accounting And Finance	0,43	C	1
Accounting Review	5,45	A+	5
Accounting, Auditing & Accountability Journal	1,46	B	2
Accounting, Organizations And Society	1,92	A	9
Actual Problems In Economics	0,13	-	1
Asian Journal Of Accounting Research	-	-	1
Behavioral Research In Accounting	0,82	B	5
Ekuitas	-	-	1
Engineering Economist	0,29	-	1
European Management Journal	1,31	B	1
Frontiers In Psychology	0,91	-	1
Global Business And Management Research	-	-	1
Group & Organization Management	1,57	B	1
International Journal Of Business And Society	0,2	-	1
International Journal Of Organizational Innovation	-	-	1
Journal Of Accounting Literature	1,1	B	1
Journal Of Applied Accounting Research	0,35	C	1
Journal Of Business and Management	-	-	1
Journal Of Business Ethics	1,97	-	2
Journal Of Indonesian Economy And Business	-	-	1
Journal Of Management Accounting Research	1,11	B	3
Journal Of Management Control	0,48	C	1
Journal Of Positive Management	-	-	1
Journal Of Theoretical Accounting Research	-	-	3
Jurnal Akuntansi Dan Keuangan	-	-	1
Jurnal Aplikasi Manajemen	-	-	2
Jurnal Ilmiah Manajemen	-	-	1
Management Accounting	-	-	1
Management Accounting Research	1,98	A	2
Management Decision	0,86	C	1
Managerial Auditing Journal	0,47	C	1
Managerial Finance	0,25	-	1

Revista Contabilidade & Finanças	0,19	-	1
Social Behavior And Personality	0,36	-	1
The Audit Financiar Journal	-	-	1
The CPA Journal	-	-	1
The Journal Of Computer Information Systems	-	-	1
Grand Total			65

As can be seen from table 3, some of the articles originate from journals with a relatively low or no grade, which may impact the validity of the results. However, including only A+, A and B rated articles would reduce the sample size to 32, which is only half of the current sample. Due to the drastically reduced number of articles, it would be unlikely to have enough perspectives on each topic to form a holistic view on all of them; hence the entire current sample will be considered.

3.3 Article classification

Management accounting literature can be divided and categorized in various ways. Hesford, Lee, Van der Stede and Young (2007) classify papers by topic, method, and source discipline. Another method of categorizing research papers is by research method. Hesford et al. (2007) classify them into analytical, archival, case, experiment, field, framework, review, survey and other/multiple.

Analytical research uses critical thinking and evaluation of facts and information to develop a hypothesis or support an idea (Reference 2020). Archival research investigates historical documents and textual materials produced by and about organizations to gain insights into the nature of events, structures and processes (Ventresca & Mohr 2002). Case studies investigate contemporary phenomena within a single organization, whereas a field study investigates such phenomena within two or more organizations (Hesford et al. 2007). Experimental research occurs in a controlled environment and includes a variable manipulated by the researcher (Williamson 2018). Framework studies combine multiple perspectives and information sources to develop new conceptual models, supplemented by an author's synthesis perspectives (Hesford et al. 2007). It differs from a review, as a review article's primary focus is to review and synthesize prior literature (Hesford et al. 2007).

4 Research results and findings

This chapter will discuss the findings from the literature review by first discussing observations from the sample, after which the findings from the papers will be summarized. After the papers are summarized, the findings will be analyzed and synthesized.

4.1 IQ1. Budgetary slack as a research topic

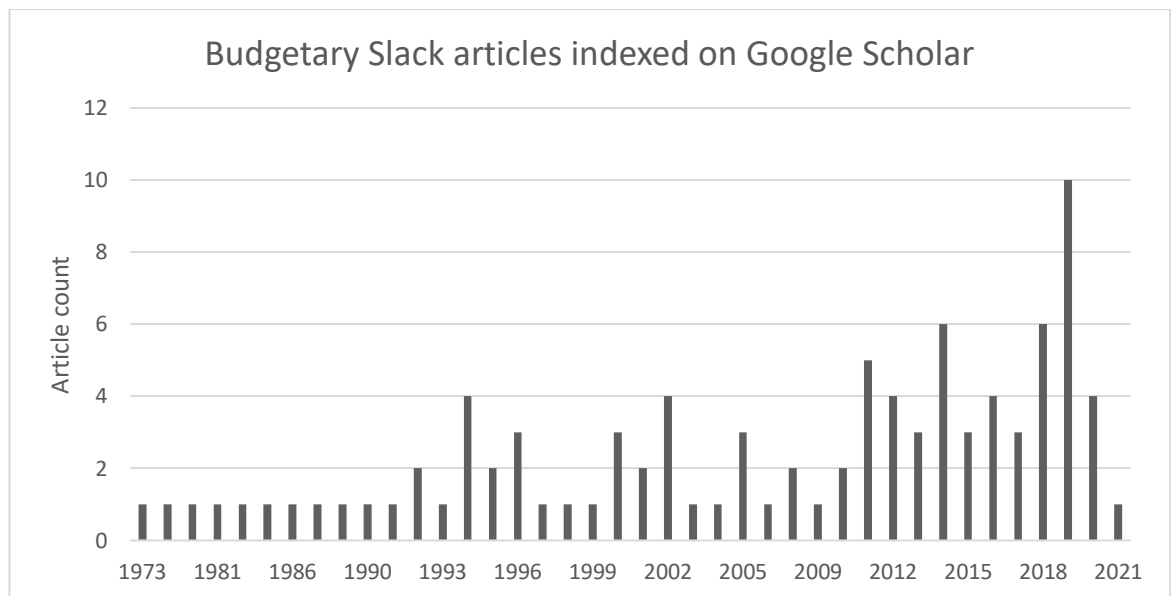


Figure 7. Budgetary slack articles indexed on Google Scholar (2021)

Budgetary slack research was in its early days around 1950-1975. The earliest mention of budgetary slack in an article that can be found on Google Scholar or Haaga-Helia's library database is in Onsi's article from 1973. However slack emerged as a topic in the budgetary context in 1950s, perhaps first in Argyris's study from 1952 (Lukka 1988). According to Lukka (1988), major contributions to the development of the research topic included studies by Schiff & Lewin in 1968 and 1970, a study by Lowe and Shaw in 1968, and the aforementioned study by Onsi from 1973. The frequency of new articles containing "Budgetary slack" in the title on Google Scholar has seen an upward trend since 2010, as figure 7 shows. This trend may indicate an increased interest in the topic in the past decade and improved accessibility to budgetary slack research, both of which are positive for the field of research. A similar increased frequency of new articles can be seen in the articles included in this literature review.

The impact of a publication can be examined using its citation count (Helsinki University Library 2021). The citation counts were acquired from Google Scholar on March 7, 2021. For the articles included in this review, the median citation count is 39, while the average is 103. The most cited article is Dunk's 1993 article titled "The effect of budget emphasis and information asymmetry on the relationship between budgetary participation and slack"

with 763 citations, followed by Van der Stede's "The relationship between two consequences of budgetary controls: budgetary slack creation and managerial short-term orientation" (2000) at 602 citations and Onsi's "Factor analysis of behavioral variables affecting budgetary slack" (1973) at 517 citations. These three articles were published in journals that have received an A+ or A in VHB-JOURQUAL3. Lastly, it appears that the most impactful time period for budgetary slack research was between 1990-2000, as articles from that period have the largest number of citations in total. Interestingly, this time period corresponds with emergence of approaches such as beyond budgeting in the late 1990s (Neely et al. 2003).

Table 4. Research methods.

Research method	Articles	% of total
Survey	25	38,5 %
Experiment	25	38,5 %
Framework	4	6,2 %
Case study	4	6,2 %
Analytical	3	4,6 %
Framework & case study	2	3,1 %
Review	1	1,5 %
Field study	1	1,5 %
Grand Total	65	100,0 %

The two research methods that are most commonly used in budgetary slack research are surveys and experiments, both accounting for 25 papers. Table 4 shows their distribution in this sample. Framework and case studies both had four papers each, and a combination of these two research methods was used in two papers. Out of the remaining five papers, three were analytical, one was a non-survey field research, and one was a review.

A large portion of budgetary slack research is analyzed quantitatively, as this analysis method was used in 55 of the papers (85%). Qualitative analysis was used in 7 of the papers (11%). The types of papers that used qualitative analysis were frameworks, reviews, and a field study with interviews. A combination of both was used in two of the papers.

The most common sample groups were managers and students, with managers primarily being the sample group for surveys and students being the sample group for experiments. There has been debate around using students as proxies for accounting practitioners, primarily due to concerns about external validity (Mortensen, Fisher & Wines 2012). There is evidence to suggest that students may not be good surrogates in researching attitudes; however, they may be viable in researching in behavioral responses (Mortensen et al. 2012). Indeed, experiment results by Mortensen et al. (2012) indicate that accounting students may be suitable as surrogates in relatively structured decision contexts, but simply any student may not suffice. Within the research papers sample, the research that used

students as surrogates primarily focused on behavioral responses. Only one such paper focused on attitudes, however, the students surveyed by Wu (2005) were ones with managerial experience, and thus the sample consisting of students is unlikely to have a significant impact on validity. 17 out of 23 papers using students as a sample used business administration students, but for 6 of the papers, the major was either not specified or multiple different majors were included. For the papers included in this literature review, the average sample size was 123 and the median sample size was 104. Three of the papers used multiple samples.

In summary, budgetary slack research is primarily done through surveys using managers as a research sample, as well as experiments using business administration students as a sample. The results are primarily analyzed quantitatively.

4.2 IQ2. Findings from literature

This section will go through the significant contributing factors of budgetary slack creation. They include information asymmetry, participative budgeting, budget emphasis, organizational commitment, pay scheme, personal factors, interpersonal factors and other factors, such as factors related to the proposal and reporting process, as well as the types of costs being budgeted.

4.2.1 Information asymmetry

Information asymmetry occurs when subordinates have information relevant to the decision process that superiors do not (Dunk 1993). Participation can reduce information asymmetry by giving superiors access to private information, but information asymmetry combined with participation may also enable subordinates to build slack into the budget (Dunk 1993). Furthermore, the managers interviewed by Dunk & Perera (1997) believe that budgets created under high information asymmetry and low participation would be less accurate, because superiors would lack the private information of the subordinates and would need to build slack to stay on the safe side. Based on these findings, it may be easy to assume that information asymmetry would increase slack regardless of the degree of participation. However, empirical evidence does not support such a direct relationship (Douglas and Wier 2000; Fisher, Frederickson & Pfeffer 2002; Lau & Eggleton 2003).

Lau & Eggleton's (2003) findings indicate that the effect of information asymmetry on slack creation is dependent on the levels of participation and emphasis on the budget. Douglas and Wier (2000) found that information asymmetry and incentives together lead to higher slack, but neither condition is sufficient on its own.

Fisher, Frederickson & Pfeffer (2002) found that the difference between superiors' and subordinates' initial negotiation positions is greater under information asymmetry. The

findings also provided further evidence to the indirect effect of information asymmetry, as budgets negotiated under information asymmetry had higher slack when an agreement was reached but lower slack when an agreement was not reached. Under information symmetry, whether negotiations ended in agreement or non-agreement did not significantly differ in slack. (Fisher, Frederickson & Pfeffer 2002.)

As the effect of information asymmetry on budgetary slack depends on other factors such as level of participation, budget emphasis, and incentives, its effect on slack is not direct. Thus, it may be concluded that information asymmetry moderates the relationship between participation and slack creation.

4.2.2 Participative budgeting

Participative budgeting provides the chance to build slack into the budget, according to the seven managers interviewed by Dunk & Perera (1997) as part of a field study. While participation may enable subordinates to build slack into the budget, it alone may not be sufficient to induce such an effect, as Dunk (1993) found that the connection between participation and slack depends on budget emphasis and information asymmetry. When all three factors were high, slack was the lowest, and vice versa. Participation can also result in slack reduction, except when budget emphasis is low (Dunk 1993). The moderating effect of information asymmetry and budget emphasis was also identified in a study by Lau & Eggleton (2003).

Wu's (2005) findings also suggest that participation can result in lower slack. In Dunk & Perera's (1997) field study, participation did not translate to higher slack due to moral, ethical and career considerations, such as "ability to demonstrate self-confidence as a manager, accountability, self-discipline and task clarification." Regardless of the degree of information asymmetry, the managers interviewed by Dunk & Perera (1997) stated that they would provide accurate information, believing that their success is linked to the superior's. The various moderating factors between participation and slack explain why Kepramareni, Yliastuti and Dewi's (2020) findings that budgetary participation increases slack appears contrary to other findings such as Wu's (2005). Additionally, Kepramareni et al (2020) found that environmental uncertainty moderates the relationships by increasing participation's effect on slack.

The moderating effect of information asymmetry on participation can be seen in a study by Fisher, Frederickson & Pfeffer (2000). Fisher et al. (2000) found that negotiated budgets where the superior has final authority are significantly lower than budgets set by the superiors without negotiation. It is because superiors tend to take a nonstrategic approach to negotiations by having an initial position similar to their desired budget and then making concessions, as taking a strategic position would be transparent to subordinates due to

subordinates having private information about their own performance capabilities. Due to making concessions from their desired budget, the final budget will be lower than if it was set unilaterally. A similar, significant difference was not found between negotiated budgets where subordinates have the final authority and budgets set by subordinates alone. This is due to subordinates acting strategically in negotiations by initially taking a low position and then making concessions, as their strategic behavior is not transparent to superiors due to information asymmetry. It allows subordinates to have a final budget similar to their desired budget. (Fisher et al. 2000.)

Participation also affects budgetary slack creation in other indirect ways as well. For example, findings by Fisher et al. (2000) suggest that superiors imposing a budget when an agreement was not reached with the subordinates has a demotivating influence on performance, perhaps due to being perceived as less fair. Conversely, if budgetary procedures are perceived as fair, job performance and subordinates' helping behavior are positively influenced, whereas slack creation is reduced (Little, Magner & Welker 2002).

Kramer and Hartmann's (2014) findings suggest that characteristics of top-down budgeting in the issuance stage cause managers to perceive the exchange as more economic and less social. In contrast, characteristics of bottom-up budgeting lead to higher perceptions of social exchange. In the negotiation phase, bottom-up budgeting does not significantly affect perceptions of social exchange; however, it does have a reducing effect on slack and a slight increase in managerial performance. Kramer and Hartmann (2014) also found that social exchange increases managerial performance, but slack reduces it. Lastly, Kramer and Hartmann (2014) found that perceptions of economic exchange reduce slack creation. Kramer and Hartmann (2014) identified social and economic exchange perceptions as a mediating factor in the relationship between top-down and bottom-up budgeting on slack.

Onsi (1973) also found that participation leads to less need to create slack due to positive communication, decreasing managers' perceived pressure to create slack. Furthermore, managers who view the budget as a game or an accounting tool build more slack into the budget. A negative attitude towards the budget increases when a manager successfully builds slack without being detected. Participative budgeting has a decreasing effect on this attitude. (Onsi 1973.)

As for the cultural influence, Dougals & Wier (2005) found that participation is higher for US managers than Chinese managers. US managers also have a higher incentive to create slack; however, these differences did not translate to a higher amount of slack.

To summarize, the effect of participation on budgetary slack is moderated by budget emphasis, information asymmetry, environmental uncertainty, and perceptions of social and

economic exchange. Moral, ethical and career considerations also affected the link between participation and budgetary slack. Participation itself also affects performance and perceived fairness indirectly.

4.2.3 Budget emphasis and pressure

Onsi (1973) found a positive correlation indicating that the more a budgetary system emphasizes attaining budgets, the more middle managers feel the need to create slack. Subordinates also felt more pressured when budgets were used as a basis for evaluation decisions (Onsi 1973). However, a similar slack increasing effect may be caused by low emphasis. Managers interviewed by Dunk & Perera (1997) believe that low emphasis may lead to more slack because attaining the budgets has less importance then.

Obedience pressure refers to a type of social influence pressure to follow the orders of those in a position of authority (Davis, DeZoort & Kopp. 2006). In an experiment by Davis, DeZoort & Kopp. (2006), the majority of the participants consider building slack into the budget as “unfair, unjust and/or contrary to their duties,” however, nearly half built slack into the budget nonetheless when faced with obedience pressure. This same slack-increasing effect was found by Apriwandi & Pratiwi (2019). The participants who built slack into the budget considered themselves less responsible compared to participants who refused to do so (Davis, DeZoort & Kopp. 2006; Apriwandi & Pratiwi 2019), but also have a higher perception of procedural justice than subordinates who do not build slack (Apriwandi & Pratiwi 2019).

In summary, budget emphasis that is too high or too low may increase slack. Introducing obedience pressure also induces slack creation.

4.2.4 Organizational commitment

Managers with a high degree of organizational commitment feel positively about their organization and seek to remain in it (Porter, Crampon & Smith 1976). De Baerdemaeker and Bruggeman (2015) found that participation in strategic planning has an indirect effect in decreasing the creation of slack through affective organizational commitment. Participation aligns the managers' behavior and decisions with the organization's goals, thus increasing organizational commitment. Findings by Islami & Nahartyo (2019) also indicate that high affective organizational commitment is linked to lower budgetary slack and vice versa. Whether leadership style is task-oriented or relationship-oriented appears to have no significant effect on the relationship (Islami & Nahartyo 2019).

The results of Nouri & Parker's (1996) case study suggest that organizational commitment has a moderating effect on the relationship between participation and slack. Similar to the other studies on organizational commitment, the results indicate that high participation

with committed individuals leads to low slack. In contrast, with low commitment, high participation leads to high slack. Nouri & Parker (1996) also theorize that some of the agency problems of budgeting may be reduced by increasing organizational commitment and participation.

A study by Nouri (1994) suggests that for managers with high levels of organizational commitment, job involvement, or the degree of importance of one's job to one's self-image may reduce the propensity to build slack. In contrast, with managers with low commitment, job involvement may increase the propensity. Kepramareni et al. (2020) also found a link between organizational commitment and decreased slack, but also found that environmental uncertainty moderates the relationship by reducing commitment's effect on slack.

Overall, the effect of organizational commitment is quite unanimously positive. It is moderated by environmental uncertainty.

4.2.5 Pay scheme

The pay scheme that an organization uses is an important variable in slack building behavior. Sampouw (2014) found that pay schemes are more dominant than personal values in determining whether a subordinate will build slack into the budget. Furthermore, in Fanani & Saudale's (2016) experiment that used a fixed-pay-plus-bonus incentive scheme, it was concluded that in the presence of such an incentive, information asymmetry leads to budgetary slack. However, it was also found that regardless of the level of information asymmetry and the self-efficacy of the subordinate, slack is still built into the budget. This result aligns with Sampouw's (2014) findings on the weaker impact of personal values in the presence of an incentive.

Truth-inducing pay schemes are standard-based and encourage subordinates to maximize performance while setting standards that equal the expected performance. In contrast, slack-inducing pay schemes are fixed-pay-plus-bonus schemes that lack the truth-inducing property (Chow, Cooper & Haddad 1991). Truth-inducing pay schemes can be pay schemes that only pay at a predetermined level (Sampouw 2014). However, for example, an experimental study by Hobson, Mellon & Stevens (2011) used a truth-inducing pay scheme that paid a bonus of \$0.10 for each unit in the budget, a bonus of \$0.05 for each unit above budget and a penalty of \$0.15 for each unit below budget.

The slack-inducing properties of fixed-pay-plus-bonus schemes and the slack-reducing properties of truth-inducing pay schemes were confirmed by Sampouw (2018). Furthermore, in Walker and Johnson's (1999) case study, a fixed-pay-plus-bonus incentive scheme was implemented, which increased slack building behavior. Curiously, Van der

Stede's (2001) findings appear to indicate that pay schemes that are more based on performance-based bonuses were associated with lower slack, however.

Chow et al. (1991) found that in the presence of information asymmetry on subordinate's performance capability, truth-inducing pay schemes had lower slack than under a non-truth-inducing scheme. However, reducing information asymmetry had a similar slack-reducing effect regardless of pay scheme as it allows superiors to restrict standards to be more accurate to past performance. Performance was not significantly affected by the pay scheme or the anticipation of a minimum standard based on a subordinate's past performance. The minimum standard set by superiors based on past performance, also known as a ratchet, did not cause an increase in slack; hence the findings imply that superiors could use them to limit slack creation and thus be able to prioritize other features of a pay scheme, such as effects on subordinate motivation or satisfaction, rather than its truth-inducing properties (Chow et al. 1991).

According to an experimental study by Hobson, Mellon & Stevens (2011), pay scheme also influences whether budgetary slack is viewed as unethical or not. Participants under a slack-inducing pay scheme considered significant slack to be unethical; however, this view was not shared by participants under the truth-inducing pay scheme.

For controlling slack creation, Chen (2012) found that the most effective method had both rewards and punishments, regardless of their perceived cost or benefit. Large perceived cost of punishment is more effective than low perceived punishment, whereas only rewards have little effect, regardless of the amount of the perceived benefit. The least effective method is doing neither reward nor punishment, as it had the highest slack. (Chen 2012.)

To summarize, fixed-pay-plus-bonus incentives were generally associated with increased slack, whereas truth-inducing incentives were associated with lower slack. Incentives have a more substantial effect than personal values, but incentives' effect appears to be smaller than information asymmetry's. To limit slack creation the most, a pay scheme should include both rewards and punishments, as only having rewards or doing nothing has little effect.

4.2.6 Personal factors

As mentioned in section 4.2.5, personal values are less dominant than pay schemes in determining whether a subordinate will build slack into the budget (Sampouw 2014). However, personal factors such as self-efficacy, Machiavellianism, and ethical concerns still affect slack-building behavior.

The first personal factor to discuss is self-efficacy. Self-efficacy means an individual's belief in their capability to perform a task successfully (Heslin & Klehe 2006). On its own, self-efficacy reduces employees' intention to create slack (Yee, Khin & Ismail 2018); however, when horizontal equity or inequity is introduced, the relationship is not as straightforward. Horizontal equity refers to the perception of being treated equally relative to peers with the same level of responsibility (Abdullah & Brink 2017). According to an experiment by Abdullah & Brink (2017), under horizontal inequity, subordinates with higher self-efficacy have a higher propensity to build slack into the budget than ones with a lower self-efficacy. Under horizontal equity, the effect is the opposite. This may be because under horizontal inequity when an individual's compensation is less than peer compensation, high-efficacy individuals may find the situation unjust and therefore build slack to retaliate (Abdullah & Brink 2017).

The second personal factor is Machiavellianism, which refers to an individual's tendency to seek personal gain with indifference to morality (Jones & Paulhus 2009). Controllers involved in managerial decision making become more susceptible to building slack into the budget if they are high Mach, but less likely if they are low Mach (Hartmann & Maas 2010). This result is not surprising when considering that budgetary slack's primary goal is to achieve personal financial gain, and doing so causes the majority to face an ethical dilemma, according to Andre, Lam & O'Donnell's (2016) study. However, the people who padded the budget were less likely to consider it wrong to do so.

Under a slack-inducing pay scheme, subordinates build less slack in the presence of ethical and reputation concerns. (Stevens 2002). The more a subordinate perceives slack as unethical, the more concerned they are about impact on reputation (Stevens 2002). Information asymmetry reduces subordinates' reputation concerns but does not affect ethical concerns (Stevens 2002). Douglas and Wier (2000) also found that ethical position affects slack and theorized that whether the effect is positive or negative will be dependent on the sample.

Psychological Capital, or PsyCap "represents an individual's positive state of psychological development, and is characterized by the individual's hope, efficacy, optimism, and resiliency" (Venkatesh 2014). Venkatesh (2014) proposes that budget participation may increase an individual's PsyCap, decreasing the propensity to create slack. The reasoning behind it is that individuals with high PsyCap would be more resilient to pressure and recognize that pressure is only momentary.

Other personal factors that decrease propensity to build slack include belongingness and self-identity (Yee, Khin & Ismail 2018), as well as positive attitudes towards the budgetary process (Huang & Chen 2009). Results from Huang and Chen's (2009) survey found that

positive attitudes towards the budgeting process cause people to perceive budgetary slack more negatively, leading to less propensity to create slack. An individual's accountability and territoriality had no significant impact on the propensity (Yee, Khin & Ismail 2018). However, Abdullah & Brink (2017) note that men are significantly more likely to build slack than women are.

In summary, high self-efficacy on its own has a slack reducing effect, but when combined with horizontal inequity, it has a slack-increasing effect. High Machiavellianism has an increasing effect; belongingness and self-identity have a decreasing effect, and accountability and territoriality have no significant effect.

4.2.7 Interpersonal factors

Interpersonal relations between subordinates and managers also affect slack creation in various ways. The primary factors found in the research included shared interest, role legitimacy, and trust in superiors.

Church, Hannan and Kuang (2012) investigated the effect of subunit managers and non-reporting employees sharing benefits from slack creation. They found that such a shared interest causes less honest reporting. This is due to shared benefit acts as self-justification for misreporting, even if the other benefitting party is unaware of the action. However, the other benefitting party's preference for honesty does cause managers to report more honestly due to it being less easy to self-justify based on other people also benefitting. The other benefitting party's preference for wealth-maximization was not found to affect the results. If benefits are not shared with subordinates, Beuren, Beck and Popik's (2015) findings indicate that managers' reports of budgets are less accurate under information asymmetry than information symmetry. In other words, managers create more slack when assistants are not aware of it. The assistants' attitudes towards slack are not affected by the behavior, only the manager's own attitudes (Beuren et al. 2015).

Douhit & Majerczyk (2019) studied the effect of the superiors' perceived role legitimacy on subordinate misreporting. They found that role legitimacy positively affects the firm, as it counteracts subordinate self-interest, and thus less slack was created. A statistically significant increase in slack was not found in the case of role illegitimacy, however. Therefore, Douhit and Majerczyk (2019) suggest that firms should justify and legitimize new superiors, especially as initial perceptions are crucial and later actions are subject to being perceived with confirmation bias (Agnew, Bateman, Eckert & Iskhakov 2018).

According to an experiment by Gago-Rodríguez & Naranjo-Gil (2016), the likelihood that subordinates will invest less effort or build slack is decreased by managers trusting superiors. Introducing suspicion does not significantly change the likelihood (Gago-Rodríguez &

Naranjo-Gil 2016). Gilabert-Carreras & Naranjo-Gil (2014) concluded that economic incentives do not moderate the relationship between trust in superiors and budgetary slack.

In conclusion, the shared benefit has a slack-increasing effect but is affected by the honesty preferences of the other benefitting party. When the benefit is not shared, managers create more slack when assistants are unaware of it. Superior's role legitimacy and trusting superiors both have a decreasing effect on slack.

4.2.8 Other factors

Other factors that affect the propensity to build slack include factors during the budgetary proposal process, the type of costs being budgeted, outside influences, and factors during the reporting phase.

The structure of the budget proposal process is a factor in determining slack creation. Less slack is created when budget proposals are disaggregated compared to aggregated budgets. Sequential budgets also had less slack than delayed budgets. Nikias, Schwartz & Spires (2010) believe the decreasing effect on slack in the sequential budgeting to be due to a cooperative frame and higher regard for the superior's welfare, as in it, superiors have more frequent interaction with subordinates and thus empathy with the superior's goals and needs may be developed.

The type of cost being budgeted also plays a part. For example, production managers interviewed by Dunk & Perera (1997) stated that slack can be built into both variable and fixed costs, with the most slack-prone areas being ones that are up to judgment rather than measurement, repairs and maintenance being a "favorite."

During the budget-setting process, Andre, Lam & O'Donnel's (2016) findings indicate that any kind of influence may lead to slack-building behavior, as different types and directions of influence did not affect the propensity to build slack nor the amount of it.

In the reporting phase, findings by Church, Kuang and Liu (2019) imply that using financial units as opposed to nonfinancial units in budget reporting has a decreasing effect on honesty when budgetary slack will allow direct financial payoff. However, in the absence of the direct payoff, honesty is reduced when making reports in non-financial units. The findings imply that firms in which budget reports are more likely to be in financial units may promote honesty by using nonfinancial measures in budget reporting. On the other hand, those that use nonfinancial reporting may benefit from giving managers more discretion in how resources are deployed, introducing a direct payoff and leading to more honest budget reporting as it would act as an incentive device. (Church, Kuang and Liu 2019.)

External investigation and self-reporting generate accountability pressure, which reduces slack, the former to a greater extent than the latter. The effect of external investigation on budgetary slack is stronger among subordinates with low moral development than those with high moral development. (Deng, Liu & Wen 2020.)

4.3 IQ3. Controlling budgetary slack creation

This section will first begin by discussing budgetary slack control methods and considerations proposed in the literature. Then the compromise triangle introduced in section 2.4 will be combined with the factors identified in section 4.2 to provide further options to reduce slack.

First of all, Fisher et al. (2000) point out that companies should not base their decisions solely on the degree of budgetary slack caused by a decision. It is not the only economic consequence of the budgeting process, as the effect on subordinate performance should also be considered. One such performance consideration comes from the budget negotiation phase. Fisher et al. (2002) found that in cases where an agreement was not reached in budget negotiations, subordinates perceived less power in determining the budgets, less satisfaction in both the budget-setting process as well as the budget itself, were less committed to the budget, and performed at a lower level.

Another consideration when deciding how much budgetary control is the fact that some studies claim that budgetary slack is not necessarily a negative thing. For example, Davila and Wouters (2005) propose that budgetary slack can be used to influence focus within the company (Davila & Wouters 2005). Slack may also be necessary in shifting managers' focus to the long-term, as Van der Stede' (2000) findings suggest that rigid budgetary control reduces slack, which in turn makes short-term targets more difficult to achieve and may lead to managers becoming more concerned with short-term results. The case study by Davila and Wouters (2005) found that under demanding conditions, where managers may need flexibility in order to meet non-financial goals, slack creation is induced. Similarly, managers interviewed by Dunk & Perera (1997) stated that some "practical" slack is necessary for the budget, as some degree of flexibility is needed to operate and deal with unexpected things.

However, if budgetary slack control is deemed necessary, Nouri (1994) suggests that to reduce the creation of slack, a company can implement policies to increase organizational commitment. Indeed, various studies found a link between high organizational commitment and lower slack (De Baerdemaeker & Bruggeman 2015; Islami & Nahartyo 2019; Nouri & Parker 1996). Some ways to increase organizational commitment include increasing employee satisfaction with compensation, policies, training, and working conditions

(Iqbal 2010). Employees should also feel like their contribution is valued and their employers care about their wellbeing (Iqbal 2010). As discussed in section 4.2.4, participation in strategic planning also increases organizational commitment, as it aligns the managers' behavior and decision with the organization's goals (De Baerdemaeker & Bruggeman 2015). Nouri (1994) also suggests that budget proposals by managers with low commitment should be adjusted more in the event of write-downs, as they are more likely to be overstated.

Another control method suggested in the literature is by using negative affectivity. Negative affectivity refers to a disposition to experience negative emotions such as anxiety, guilt, anger, rejection, sadness, and distress (Watson & Clark 1984; Penney & Spector 2005). Blay, Douthit & Fulmer (2019) suggest that an individual's intensity in which they experience these negative affects is predictive of subordinate's preference for honesty. Findings indicate that preferences for honesty reduce slack. In other words, a subordinate's desire to avoid negative affect would drive them to adhere to a norm of honesty due to individuals with high negative affect intensity (NAI) experiencing more negative affect and adverse effects from violating the norm. Blay et al. (2019) suggest that relying on a subordinate's preference for honesty as a control method would lead to higher profit; however, they point out that attempts to assess preferences for honesty directly are susceptible to being gamed by those with weaker preferences. A method to circumvent this gaming would be to use an affect intensity measure (AIM), as NAI was an indicator of preference for honesty. Furthermore, the link between affectivity and honesty suggests that "firms can implement policies that increase the affective salience of slack creation to increase the odds that affective reactions occur." However, Blay et al. (2019) also point out that this method should be applied with care as negative affect may lead to adverse outcomes.

Budgets are often tied to performance evaluation. Indeed, performance feedback quality increases perceptions of procedural justice and interactional justice, and interactional justice in turn decreases propensity to build slack and increases trust in the supervisor (Rismanyanti, Lembut & Wijayanti 2018). As discussed in 4.2.7, trust in superiors has a further decreasing effect on slack (Gago-Rodríguez & Naranjo-Gil 2016).

Maiga, Nilsson & Jacobs (2014) found that budgetary participation, activity-based costing (ABC) or information technology for enhanced communication (ITEC) do not have significant main effects on budgetary outcomes. However, ABC does have a moderating effect on the relationship between participation and slack. Furthermore, both ITEC and ABC act as moderators between participation and managerial performance (Maiga, Nilsson & Jacobs 2014). Broad scope managerial accounting systems do not moderate the effects of emphasis, participation or uncertainty on slack creation (Linn, Casey & Johnson 2001).

Using the compromise triangle (figure 4) introduced in section 2.4 and the research findings of 4.2 provides possible other avenues to reduce budgetary slack creation. First, there is perceived opportunity, which refers to knowledge or ability to carry out an action. In the case of budgetary slack, participation creates one such opportunity (Dunk & Perera 1997). However, as participation is linked to organizational commitment (De Baerdemaeker & Bruggeman 2015), can decrease budgetary slack through PsyCap (Venkatesh 2014) and is used for motivation and satisfaction reasons (Shields & Shields 1998), removing the opportunity outright may not be the best approach. Instead, if combined with factors that increase organizational commitment, it can reduce slack (Nouri & Parker 1996).

The next side of the triangle to be discussed is perceived pressure, which means motivation or incentive. Any kind of external influence may lead to slack building behavior (Andre et al. 2016), but one such influence discussed was obedience pressure. Obedience pressure means following orders of those in positions of authority. It causes subordinates to build slack into the budget even if they consider it unfair, unjust, or contrary to their duties (Davis, DeZoort & Kopp. 2006). Another pressure discussed was financial incentives. Studies found fixed-pay-plus-bonus type incentives to increase slack building behavior (Sampouw 2018; Walker & Johnson 1999), and Sampouw (2014) found that incentives are stronger than personal values in determining slack building behavior. Therefore, it could be concluded that eliminating or even minimizing external pressures that increase the propensity to build slack would lead to less slack.

The last side of the triangle is rationalization or justification of actions. One such justification discussed in the research was shared interest. Shared interest was found to cause less honest reporting, as sharing the benefit of building slack with non-reporting employees acts as a justification for the reporting employee to build slack into the budget (Church et al. 2012). This justification was reduced by the other party's preference for honesty. Another justification discussed was the perception of unjustness caused by individuals with high self-efficacy under horizontal inequity (Abdullah & Brink 2017). As self-efficacy on its own reduces the propensity to create slack (Yee et al. 2018), building horizontal equity may be a better avenue to minimize the slack-increasing effect.

In summary, other factors such as the impact on subordinate performance and the need for budgetary slack control should be considered before control methods are implemented. If budgetary slack control methods are implemented, some options include increasing organizational commitment, relying on a subordinate's preference for honesty, focusing on providing good performance feedback, eliminating or minimizing external slack-inducing pressures, and building horizontal equity.

4.4 IQ4. Company strategy, industry, location, and type considerations

This section starts by discussing how the different strategies presented by Porter and Miles & Snow affect the approach to budgetary slack. Then, the effects of industry, location, and the type of costs are briefly discussed.

A company's strategy should be considered when deciding how much emphasis is put on budgetary control. According to Van der Stede (2000), slack is not counterproductive for firms with a differentiation strategy as in such companies, payoffs for product innovation are more long-term and less certain. As discussed previously, budgetary slack may be beneficial when focusing on the long-term (Van der Stede 2000) or when faced with uncertainty (Davila & Wouters 2005). This likely explains Van der Stede's (2001) later findings that firms with a differentiation strategy tend to have less tight budgetary control and Fuad's (2018) findings that companies with a diversification strategy have more slack. Miles & Snow's prospector strategy also focuses on innovation; therefore Van der Stede's (2000) results likely apply to that strategy as well. Indeed, Fuad, Daljono & Ratmono (2018) found that both the strategies at extreme ends (defender and prospector) tend to place a lower emphasis on budgets and have less slack. On the flip side, slack can be a waste for firms with strategies focusing on low cost (Van der Stede 2000). Therefore companies adopting Porter's overall cost leadership strategy should place a higher emphasis on budgetary slack control.

The benefit of budgetary slack in uncertain situations (Davila & Wouters 2005) should also be a consideration regarding the volatility of the industry of the company and the economical situation in its country of operations.

Companies with many costs based on judgment rather than measurement, such as repairs and maintenance, may need to pay extra attention to the budgeting of such costs due to their increased propensity to have slack (Dunk & Perera 1997).

Regardless of the type and size of the company, focusing on aligning managers' behaviors and decisions with the organization's goals and increasing organizational commitment appears to be the simplest and most effective methods to decrease slack creation.

5 Conclusions

5.1 Key findings

Budgetary slack research was in its early days around 1950-1975, with the period between 1990-2000 being a particularly impactful time for the field of research, based on citation count. Budgetary slack research is primarily done through surveys using managers as a research sample and experiments using business administration students as a sample. The results are primarily analyzed quantitatively.

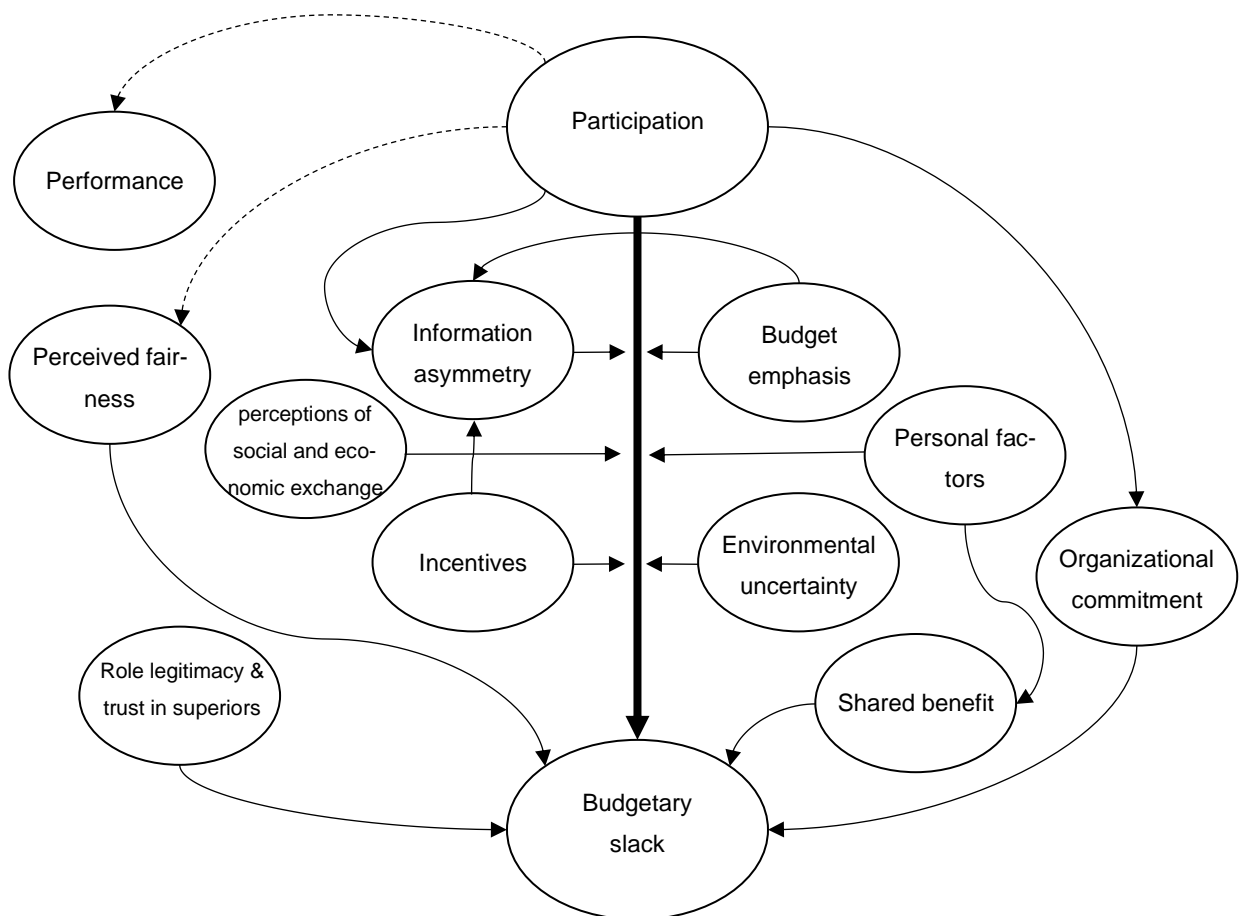


Figure 8. Factors affecting budgetary slack creation.

Figure 8 summarizes the relationships between the factors according to the literature reviewed in this thesis. As can be seen in the figure, the relationships between the factors are quite interwoven and complex. The interconnectedness explains results that are seemingly contractictory at times, as factors affect each other in various and sometimes unpredictable ways.

The effect of participation on budgetary slack is moderated by budget emphasis, information asymmetry, environmental uncertainty, and social and economic exchange per-

ceptions. Moral, ethical and career considerations also affect the link between participation and budgetary slack. Participation itself also affects performance and perceived fairness indirectly.

The effect of information asymmetry on budgetary slack depends on other factors such as level of participation, budget emphasis, and incentives, and its effect on slack is not direct. Budget emphasis that is too high or too low may have an increasing effect on slack. Introducing obedience pressure also induces slack creation.

Fixed-pay-plus-bonus incentives were generally associated with increased slack, whereas truth-inducing incentives were associated with lower slack. Incentives have a stronger effect than personal values, but incentives' effect appears to be smaller than information asymmetry's. To limit slack creation the most, a pay scheme should include both rewards and punishments, as only having rewards or doing nothing has little effect.

High self-efficacy on its own has a slack reducing effect, but when combined with horizontal inequity, it has a slack-increasing effect. High Machiavellianism has an increasing effect; belongingness and self-identity have a decreasing effect, and accountability and territoriality have no significant effect. Shared benefit has a slack-increasing effect but is affected by the honesty preferences of the other benefitting party. When the benefit is not shared, managers create more slack when assistants are unaware of it. Superior's role legitimacy and trusting superiors both have a decreasing effect on slack.

Lastly, overall, the effect of organizational commitment is fairly unanimously positive. The unanimously positive effect of organizational commitment makes it a prime avenue to decreasing budgetary slack.

However, before deciding which budgetary slack control methods to use, other factors such as the impact on performance and whether it is even necessary to limit slack creation should be considered. The necessity is determined primarily by company strategy, as slack may not be counterproductive for companies with a differentiation or prospector strategy. On the other hand, companies focusing on cost leadership should place a higher emphasis on budgetary slack control. Companies in a volatile environment should also carefully consider whether it is necessary to limit budgetary slack, as it can provide a buffer against uncertainty.

If budgetary slack control methods are implemented, some options include relying on a subordinate's preference for honesty, focusing on providing good performance feedback, eliminating or minimizing external slack-inducing pressures, and building horizontal equity.

Factors affecting the validity of the outcomes include the inclusion of articles from journals that have received a relatively low or no grade from VHB or Scimago, as well as inclusion of articles with a low impact as determined by citation count. However, the analysis takes into account multiple sources, which allows identification of conflicts between research outcomes. The samples used in the papers were discussed in section 4.1 and were not found to have major issues.

For further research, the antecedent factors and factors falling within the context category proposed by Elmassri & Harris (2011) could be analyzed further. Papers studying factors like the effect of industry sector, company size, ownership structure, and company and national culture were not found in sufficient quantities within the sample to allow a holistic view of these factors to be formed.

5.2 Personal learning

This thesis process began in the autumn semester of 2020 with the thesis planning course where the topic was decided to be about budgetary slack; however, the finer details of the topic changed along the way. The initial plan was to study how budgetary slack is controlled in Nordic countries via a survey. However, upon looking further into the topic, I concluded that the initial approach would be unlikely to yield much value within the scope of a thesis and would include far too many assumptions in both the survey creation and analysis to be reliable. I also identified that some of the research papers have results that appeared to disagree with each other. Because of these reasons, the research method was shifted towards a literature review approach in late January of 2021, as I believed such an approach would yield more value and lead to more reliable results. I believe that identifying issues with the initial approach and finding a new angle to the topic was a valuable part of the learning process.

The most evident benefit of writing this thesis has been the abundant knowledge I have gained about various aspects of budgetary slack creation and control methods, which I hope will aid me in my future career. However, I believe that the most practical skill I have developed during the writing process is synthesizing large amounts of information into a coherent whole that observes a topic from various angles.

It could have been beneficial to focus more on the psychological theories related to the topic, as well as analyze the limitations, research methods and results on a deeper level. However, reading, organizing and synthesizing 65 research papers was already quite arduous, and adding more to the workload would have caused the time commitment to be significantly more than a typical thesis. If I were to start over, I would demarcate the topic even further because the workload has turned out to be far more than expected.

Nonetheless, I believe that including a large number and a variety of papers was a good choice. It allowed for the holistic overview of budgetary slack that was the primary aim of this thesis to be developed. It also eases the identification of further research avenues, as summaries are provided from many papers. From those summaries, conflicts between the research papers can be identified. Furthermore, as the sample included every English-language peer-reviewed paper regarding private sector budgeting (for which the full text was available) included in the library database, it gives some idea of which kinds of research topics are not yet broadly studied.

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Appendices

Appendix 1. Articles.

Appendix lists all the articles included in the sample. Abbreviations used in the analysis column are QN for quantitative, QL for qualitative and MIX for mixed.

Author(s)	Year	Journal	SJR 2019	JQ3	Cita- tions	Method	Sample size	Sample	Anal- ysis
Abdullah & Brink	2017	Journal Of Theoretical Accounting Re- search	-	-	19	Experiment	109	Graduate students	QN
Andre, Lam & O'Donnel	2016	Academy Of Accounting And Financial Studies Journal	0,18	-	0	Experiment	66	MBA students	QN
Apriwandi & Pratiwi	2019	Global Business And Management Re- search	-	-	0	Experiment	80	Accounting students	QN
Beuren, Beck & Popik	2015	Revista Contabilidade & Finanças	0,19	-	4	Experiment	90	Managers and other leaders	QN
Blanchard & Chow	1983	Management Accounting	-	-	12	Analytical	-	-	QN
Blay, Douhit & Fulmer	2019	Management Accounting Research	1,98	A	14	Experiment	60	Finance majors	QN
Chen	2012	Engineering Economist	0,29	-	12	Experiment	65	Accounting students	QN
Chow, Cooper & Haddad	1991	Accounting, Organizations And Society	1,92	A	195	Experiment	55	Business students	QN
Church, Hannan & Kuang	2012	Accounting, Organizations And Society	1,92	A	143	Experiment	Multiple	Undergraduate stu- dents	QN
Church, Kuang & Liu	2019	Accounting, Organizations And Society	1,92	A	19	Experiment	81	Undergraduate stu- dents	QN
Davila & Wouters	2005	Accounting, Organizations And Society	1,92	A	265	Case study	-	-	MIX
Davis, DeZoort & Kopp	2006	Behavioral Research In Accounting	0,82	B	173	Experiment	77	Management account- ing professionals	QN
De Baerdemaeker & Brug- geman	2015	Management Accounting Research	1,98	A	75	Survey	247	Managers	QN
Deng, Liu & Wen	2020	Frontiers In Psychology	0,91	-	0	Experiment	213	Accounting students	QN
Douglas & Wier	2005	Journal Of Business Ethics	1,97	-	144	Survey	220	Managers	QN
Douglas & Wier	2000	Journal Of Business Ethics	1,97	-	171	Survey	220	Managers	QN
Douhit & Majerczyk	2019	Accounting, Organizations And Society	1,92	A	10	Experiment	?	Students	QN

Douhit & Stevens	2015	Accounting Review	5,45	A+	79	Experiment	30	Students	QN
Dunk	1993	Accounting Review	5,45	A+	763	Survey	79	Managers	QN
Dunk	1995	Accounting And Finance	0,43	C	43	Survey	79	Managers	QN
Dunk & Nouri	1998	Journal Of Accounting Literature	1,1	B	249	Review	-	-	QL
Dunk & Perera	1997	Accounting, Auditing & Accountability Journal	1,46	B	96	Field study	7	Managers	QL
Elmassri & Harris	2011	Journal Of Applied Accounting Research	0,35	C	38	Multiple (framework and case study)	-	-	MIX
Fanani & Saudale	2019	Jurnal Akuntansi Dan Keuangan	-	-	4	Experiment	65	Accounting students	QN
Fisher, Frederickson & Peffer	2002	Accounting, Organizations And Society	1,92	A	253	Experiment	104	Accounting students	QN
Fisher, Frederickson & Peffer	2000	Accounting Review	5,45	A+	234	Experiment	185	Undergraduate accounting students	QN
Fuad	2018	Ekuitas	-	-	0	Survey	101	Employees	QN
Fuad, Daljono & Ratmono	2018	International Journal Of Business And Society	0,2	-	0	Survey	101	Business unit middle level managers	QN
Gago-Rodríguez & Naranjo-Gil	2016	Management Decision	0,86	C	15	Experiment	160	Managers	QN
Gilabert-Carreras & Naranjo-Gil	2014	Journal Of Positive Management	-	-	5	Experiment	-	Students	QN
Hartmann & Maas	2010	Behavioral Research In Accounting	0,82	B	146	Experiment	136	Finance and control students	QN
Heinle, Ross & Saouma	2014	Accounting Review	5,45	A+	64	Analytical	-	-	QN
Hobson, Mellon & Stevens	2011	Behavioral Research In Accounting	0,82	B	122	Experiment	104	Accounting students	QN
Huang & Chen	2009	Social Behavior And Personality	0,36	-	28	Survey	216	Managers	QN
Islami & Nahartyo	2019	Journal Of Indonesian Economy And Business	-	-	2	Experiment	64	Management students	QN
Kepramareni, Yliastuti & Dewi	2020	Jurnal Ilmiah Manajemen	-	-	0	Survey	152	Employees	QN
Kramer & Hartmann	2014	Abacus	0,45	B	33	Survey	127	Senior managers	QN

Langevin & Mendoza	2013	European Management Journal	1,31	B	99	Framework	-	-	QL
Lau & Eggleton	2003	Accounting And Business Research	0,86	B	63	Survey	103	Managers	QN
Leavins, Omer & Vilutis	1995	Managerial Finance	0,25	-	33	Survey	168	Managers	QN
Linn, Casey & Johnson	2001	The Journal Of Computer Information Systems	-	-	40	Survey	200	Managers	QN
Little, Magner & Welker	2002	Group & Organization Management	1,57	B	82	Survey	149	Managers	QN
Lukka	1988	Accounting, Organizations And Society	1,92	A	398	Framework & case study	9	Managers, controller and managing director	QL
Maiga, Nilsson & Jacobs	2014	Journal Of Management Control	0,48	C	11	Survey	313	Managers	QN
Ngo, Doan & Huynh	2017	Asian Journal Of Accounting Research	-	-	3	Survey	99	Managers	QN
Nikias, Schwartz & Spires	2010	Behavioral Research In Accounting	0,82	B	26	Experiment	112	Business students	QN
Nouri	1994	Accounting, Organizations And Society	1,92	A	145	Case study	139	Supervisors and managers	QN
Nouri & Parker	1996	Behavioral Research In Accounting	0,82	B	283	Case study	135	Managers, executives	QN
Onsi	1973	Accounting Review	5,45	A+	517	Survey	Multiple	Managers	MIX
Ramadan	1989	Accounting And Business Research	0,86	B	24	Survey	120	Finance directors or senior executives	QN
Rismanyanti, Lembut & Wijayanti	2018	Jurnal Aplikasi Manajemen	-	-	Not found	Survey	42	Managers	QN
Sampouw	2018	Jurnal Aplikasi Manajemen	-	-	6	Experiment	35	Accounting students	QN
Schachner	1975	The CPA Journal	-	-	0	Analytical	-	-	QN
Schatzberg & Stevens	2008	Journal Of Management Accounting Research	1,11	B	57	Experiment	96	MBA students	QN
Stevens	2002	Journal Of Management Accounting Research	1,11	B	290	Experiment	52	Accounting students	QN
Su & Ni	2013	International Journal Of Organizational Innovation	-	-	22	Survey	84	Managers	QN
Van Der Stede	2000	Accounting, Organizations And Society	1,92	A	602	Survey	153	Business unit managers	QN
Van Der Stede	2001	Accounting, Auditing & Accountability Journal	1,46	B	50	Survey	153	Managers	QN

Venkatesh	2014	Journal Of Theoretical Accounting Research	-	-	3	Framework	-	-	QL
Venkatesh	2012	Journal Of Theoretical Accounting Research	-	-	5	Framework	-	-	QL
Walker & Johnson	1999	Journal Of Management Accounting Research	1,11	B	76	Case study	-	-	QN
Wu	2005	Journal Of Business and Management	-	-	28	Survey	Multiple	Accounting students	QN
Yee & Khin	2014	Actual Problems In Economics	0,13	-	2	Framework	-	-	QL
Yee, Khin & Ismail	2018	The Audit Financiar Journal	-	-	0	Survey	475	Budget makers	QN
Yuen	2004	Managerial Auditing Journal	0,47	C	127	Survey	108	Hotel managers	QN