The research project

This book is based on a research study carried out by the author in 1964 and 1965. This study covered the budget systems in six manufacturing plants in the Netherlands, belonging to five different industrial companies in different industries: printing, metal products, textiles, electronics and food. The study used both an analysis of company records and extensive interviewing. Altogether about 90 first-, second- and third-line manufacturing managers and about 50 controllers, budget accountants and work study engineers were interviewed: over 400 hours were spent in these interviews, which followed a structured pattern with both open and closed (pre-coded answer) questions. The research method was tried out in the first two plants and thereafter standardized for the remaining four plants. The data collected in the interviews are partly qualitative and partly quantitative. The qualitative data consist of the interviewees' comments, written down as literally as possible. The quantitative data consist of the coding of the interviewees' answers where coding was possible and of data collected from company records. A selected part of the quantitative data was subjected to a statistical analysis (correlation and factor analysis) with the help of a large-scale electronic computer. The results of this statistical analysis were used
to test some hypotheses set before or in the beginning of the project. They were also used to explore the data as fully as possible in search for relationships which had not been predicted but which looked meaningful for understanding the functioning of the budget systems in the six plants. Most of the conclusions in this book are based upon this exploration; they are therefore tentative and do not have the value of scientific proof, but they can serve as hypotheses for further studies.

The qualitative data and the statistically treated quantitative data were related to all relevant theoretical concepts available to the author, from the fields of accounting theory, the psychological theory dealing with motivation, and organization theory. The total investigation was guided by a systems conception: the budget system was seen as a part of the larger organizational system and having its own inputs and outputs. The purpose of the study can be interpreted as discovering the relationships between the inputs and the outputs of a budget system and explaining them in terms of different disciplines, mainly accounting, psychology and organization theory. The book is divided for this purpose into four parts:

part I investigates the existing relevant theory;
part II describes the research method;
part III applies the theory and the data collected in the research to draw the picture of the input-output relationships of the budget system and to arrive at conclusions;
part IV translates these conclusions rather freely into practical recommendations for those actually involved in the process of budget control.

The budget system and its outputs

Not everything covered by the term 'budget' is included in the subject of this book. The interest of the project was in budgets as financial plans and in all financial standards and objectives for current operations. It also included technical, non-financial efficiency standards, at least to the extent that these were not primarily set for determining workers' wages but for determining managerial efficiency. The non-financial efficiency standards are the bricks the budget structure is built from. The study did not include investment or capital budgeting to budgeting for current operations.

The outputs of the budget system which are considered (see Chapters 1 and 7) are not the outputs in terms of profit forecasts or budget variance reports. What output here is a contribution to the final goals of the organization and these goals involved are to be profitability in the interest of stockholders and also the well-being of employees. The contributions of budget systems to these goals which are considered are the motivation of managers to better performance and their job satisfaction (as an indicator of their well-being). An implicit issue in the total analysis is that organizational control and individual autonomy present in any management control system and which is separated from the democratic ideals of large enterprise. It has its implications for both the motivation satisfaction of the people who were interviewed, but also their attitude towards the total study.

The budget system's contribution to motivation is seen in the background of the psychological theory of job motivation of a budgetee (a manager working in a budget system) into two components: the relevance of budget standards and the attitude of the budgetee towards them. Motivation to fulfill budgetary standards depends on both relevance component; the attitude component can counteract the relevance component, but it cannot in the context of job satisfaction of budgetees as an organizational system not only their satisfaction with their jobs in a budget system also their feelings of pressure and anxiety in their job.

Inputs of a budget system

A number of inputs into a budget system are related to relevance, attitude and job satisfaction. Some of these are the basis of common sense or of research work by found accordingly; other inputs were identified in the data in this study. The inputs are classified and the
The outputs of the budget system which are considered in this book (see Chapters 1 and 7) are not the outputs in terms of accounting, like profit forecasts or budget variance reports. What is considered an output here is a contribution to the final goals of the organization. The final goals involved are assumed to be profitability in the interest of the stockholders and also the well-being of employees of all ranks. The contributions of budget systems to these goals which were measured in this study are the motivation of managers to better performance (as a contribution to profitability) and their job satisfaction (as a contribution to their well-being). An implicit issue in the total analysis is the conflict between organizational control and individual autonomy which is present in any management control system and which cannot be seen separated from the democratic ideals of large parts of present-day society. It has its implications for both the motivation and the job satisfaction of the people who were interviewed, but also for the author's attitude towards the total study.

The budget system's contribution to motivation is studied against the background of the psychological theory of job motivation. The motivation of a budgetee (a manager working in a budget system) is split into two components: the relevance of budget standards to the budgetee's tasks, and the attitude of the budgetee towards the system. Actual motivation to fulfill budgetary standards depends first of all on the relevance component; the attitude component can either reinforce or counteract the relevance component, but it cannot motivate by itself. In the context of job satisfaction of budgetees as an output of a budget system not only their satisfaction with their jobs in a narrower sense but also their feelings of pressure and anxiety in their jobs are considered.

Inputs of a budget system

A number of inputs into a budget system are related to the outputs of relevance, attitude and job satisfaction. Some of these were predicted on the basis of common sense or of research work by others and were found accordingly; other inputs were identified in the exploration of the data in this study. The inputs are classified and the various classes of
inputs are described in the chapters 8 through 14 of Part III of the book. The first class of inputs deals with the policy of setting budgetary standards tightly or loosely. The fact that standards are set can have a very real meaning for a budgetee's achievement motivation. Need for achievement is a powerful motivator. In order for a standard to function as a standard for achievement it should be tight, so tight that there is a real risk of its not being attained. This means that there should be a difference between such standards and the performance actually expected which is used in coordinating budgets in the accounting system. On the other hand it appears that standards which are so tight that they are seen as impossible destroy motivation. An important role is reserved for the budgetee's superior to judge what level of standards an individual budgetee can tolerate. Interesting results have been obtained by comparing budgetees' evaluations of their departments' performance to the official performance data in the budget variance reports. In some plants the standards appear to be well 'internalized' and to agree with people's personal evaluation standards; in others they are not internalized at all. Besides the level of the standards other factors play a role here as well. These are illustrated in case studies.

Another class of inputs into budget systems deals with the process of participation in the setting of standards by the budgetee. There appears to be a difference in budgetees' reactions to participation in financial and in non-financial standard setting. Budgetees who have no experience in participation in financial standard setting (most of these were first-line managers) generally do not desire it. If they do participate, however, they appear to be much more motivated to fulfill the financial standards that are set. Participation in the setting of non-financial (technical) standards or objectives is considered a prerogative of any manager; they feel dissatisfied if they are not enough involved. The reaction of a budgetee to participation can be shown to be influenced by his personality or culture: authoritarians are less motivated by participation in budget setting than non-authoritarians.

The inputs into a budget system by the controller's department and work study staff consist of a technical contribution and a personal contribution. Both appear to have more negative than positive potential: the staff departments can easily have a negative impact upon the functioning of a budget system, but their possibilities for positively influencing motivation are limited; this depends much more on the budgetees in manufacturing management. In the technical staff's task the most important condition is that accomplishments. Although this is self-evident and denied it not always done. Assigning responsibilities in account can be rather difficult and increasingly so with the organizational towards greater interdependence between the effect of the periodic management information, such as reports, which staff departments produce, appears to be on its being accompanied by personal two-way common staff and line management and even more between the boss. For the staff's contribution to good personal staff motivation it appears to be most important that the staff member specialist and that he tries to behave tactfully. There are some interesting differences in attitude between line managers in general which undoubtedly play mutual communication. Staff people tend to assume a role, identifying less with what goes on on the shop floor, have different satisfactions and frustrations in their jobs than have. From a point of view of personnel management in this study appear to be somewhat less well managed the fact that the staff has more scope in spooling data than in functioning of a budget system may be rather frustrating, the way to overcome this frustration is for the staff to have role as one of education.

Of all inputs into a budget system the behavior of the boss is the most crucial relationships to its outputs. The depends on his superior, so this type of influence often w however modified by the managerial skills of individual managers. Superior-subordinate communication can influence budget motivation through frequent person-to-person meetings about budget results and through the use of budget performance appraisal. In these cases the increase in motivation be accompanied by an increase in pressure feelings in will be motivated mainly by outside pressure. This presupposes teamwork between budgetees and lead to undesirable goating and fighting the system. Superior-subordinate
motivation are limited: this depends much more on the superiors of the budgetee in manufacturing management. In the technical part of the staff's task the most important condition is that accounts follow responsibilities. Although this is self-evident and denied by nobody, it is not always done. Assigning responsibilities in accounting terms can even be rather difficult and increasingly so with the development of organizations towards greater interdependence between their parts. The effect of the periodic management information, such as budget variance reports, which staff departments produce, appears to depend strongly on its being accompanied by personal two-way communication between staff and line management and even more between the budgetee and his boss. For the staff's contribution to good personal staff-line communication it appears to be most important that the staff man is a competent specialist and that he tries to behave tactfully.

There are some interesting differences in attitude between staff people and line managers in general which undoubtedly play a role in their mutual communication. Staff people tend to assume more of a spectator role, identifying less with what goes on on the shop floor; they also have different satisfactions and frustrations in their jobs than line managers have. From a point of view of personnel management the staff people in this study appear to be somewhat less well managed than the line. The fact that the staff has more scope in spoiling than in improving the functioning of a budget system may be rather frustrating to staff people; the way to overcome this frustration is for the staff to conceive of its role as one of education.

Of all inputs into a budget system the behavior of the budgetee's boss bears the most crucial relationships to its outputs. The boss in his turn depends on his superior, so this type of influence often works plant-wide, however modified by the managerial skills of individual middle-level managers. Superior-subordinate communication can be shown to influence budget motivation through frequent person-to-person contact about budget results and through the use of budget results in performance appraisal. In these cases the increase in motivation will easily be accompanied by an increase in pressure feelings in the budgetee: he will be motivated mainly by outside pressure. This pressure may disrupt teamwork between budgetees and lead to undesirable effects like scapegoating and fighting the system. Superior-subordinate communication
has positive effects on motivation without pressure symptoms when it uses group methods of leadership, like the use of department meetings and most important of all, the creation of a game spirit or an atmosphere of sportsmanship around attainment of budgetary goals. The game spirit represents motivation of the budgetee 'from within'. It depends strongly upon the leadership skills of the budgetee's superior, but also upon the way the system is organized: it presupposes a certain amount of free scope and the absence of rigidity, because a game requires a free area to play in. The motivation of adults through games is a neglected area in psychological theory; it could be called a blind spot of psychology, which is surprising because in daily life the motivating forces in game situations can be observed widely. The significance of game situations for our society as a whole has been shown most clearly by the Dutch social historian Huizinga, whose essay 'Homo Ludens' has inspired the conclusions in this study about the game aspect of budgeting. Technically the necessary scope in budget control systems to permit the game spirit to operate can be created by the application of statistical techniques similar to those used in quality control, like the use of control limits. The use of statistical techniques in budgeting is still quite rare. None of the five companies which were studied in this project used them, so that this book cannot report on empirical evidence of their effect. Their use is more meaningful for the larger corporation than for the small one.

All inputs into the budget system mentioned so far were internal inputs: they could be influenced by management. As budget systems are open systems in interaction with the environment outside the organization, we must also take account of external inputs. One group of external inputs consists of the type of people available as budgetees. Their age and generation are important: younger people appear to be more figure-conscious and more independence-oriented. Their length of service in the job will also influence the degree to which they make use of the figures offered to them: budgetees subjected to a system of job-rotation, who are more recent in a job, will automatically have to rely more on the figures for lack of experience as an alternative way of controlling their departments. The personality and the cultural background of the budgetees play a role, for example their 'job involvement': the inner urge to work hard and have tight goals for achievement. Another group of external inputs is given through the technology of the structure of its products and the managerial climate of management, who in their turn are influenced by the operating in. The micro-analysis of management processes can be made more meaningful when supplemented by an interdisciplinary macro-analysis of forces working on the
of external inputs is given through the technology of the plant, the cost structure of its products and the managerial climate created by its top management, who in their turn are influenced by the market they are operating in. The micro-analysis of management processes within the plants can be made more meaningful when supplemented with an interdisciplinary macro-analysis of forces working on the plant as a whole.