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Michael A. Novak

BUDGETARY CONTROL IN A MANUFACTURING PLANT:

THE PROBLEMS AND PLANS FOR IMPROVEMENT

AN EXTENDED CASE STUDY

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The Situation

The case involves a relatively independent subsidiary of a large national corporation. The subsidiary, herein referred to as MANU, employs a total work force of just under 500 people. It is basically a small order job shop, producing sophisticated, miniature motors, requiring skilled engineering and machining. The subsidiary had been a family owned and operated company for 20 years, having been bought out by the corporation in 1967. Most of the employees have been with the company over 15 years. Most persons in managerial positions have come up through the ranks.

The author was called in as a consultant to design and conduct a management training program for the lower level managers (managers, supervisors and foremen), most of whom had little or no formal managerial education. The author agreed to enter the system not under the above contract but rather to do an analysis of the entire management system and to offer action recommendations — one of which might well be a management training program.

During the course of forty individual interviews and five small group sessions, six major issues surfaced, one of which was referred to as "scorekeeping" — the process for monitoring a unit's productivity and efficiency. The interviews and group sessions included all management levels. On the issue of scorekeeping, basically two differing viewpoints emerged, one being held by the plant manager and his staff while the other was held by middle and lower level managers.

A summary statement agreed on by these lower-level managers was that the scorekeeping system was inaccurate, unfair and demoralizing.

The lower managers saw the situation as follows: 1) when the monthly shipping-dollar goal is met, no questions are asked, no one seems too worried about high amounts of overtime, waste or low efficiency; 2) when the goal is not met, performance and procedures throughout the system are scrutinized and somebody gets blamed for the failure; 3) meeting the goal every month seems at times to be less efficient than being flexible and meeting goals every 3 or 4 months — monthly goals force overtime near the end of the month and create slack time during the first week of the following month — some orders for the month fall through, thereby necessitating some orders in the following month to be moved up; 4) "dollars-shipped" seems to be an unfair and oversimplified unit of account for assessing each department's efficiency and productivity — for example, one department loses "A labor," which is produced hours, when it has to do "rework" caused by some other department's error; 5) routine, individual performance appraisal is basically negative — records are kept only of failures and not for what is done well or over and above what is required; recognition and positive reinforcement in the form of a bonus usually occur only at the end of the year and are usually uniform across each level; 6) when a target date is missed anywhere along the line, no one is really accountable — it's always the other guy's fault. A summary statement agreed on by these managers was that the scorekeeping system was inaccurate, unfair and demoralizing.

From top management's point of view: 1) the scorekeeping system is not oversimplified but considers yield, efficiency and produced hours; 2) the system is fair and accurate with realistic and flexible limits on yield, efficiency, produced hours, rework, scrap, overtime, etc. — all to be brought in line under total cost; 3) the lower level managers take too simplified of an approach to solving their problems and only consider one dimension at a time, such as overtime, produced hours or efficiency; 4) these managers do not seem to be committed to "getting the job done" or "taking ownership for the dollars-to-be-shipped" but rather are concerned about "playing it safe and worry only about their narrow job, not its impact on others."

There seems to be two basic questions. Is the unit of account oversimplified or the application of it? Is there a lack of ownership on the part of some managers or is there nothing to own?[1] There are several additional related but subsidiary issues which will be discussed in terms of the above two.

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Analysis

In analyzing the above, the author identified a) the violation of several management accounting principles and b) the formation of dysfunctional interpersonal behavior cycles which seemed to explain the problems and point to possible solutions.

The types of accounting information that Simon identified as necessary in order for a manager to answer three basic managerial questions [Simon, 1957, p. 20] — were either not provided adequately by the accounting system or, if provided, were not being used. The three questions Simon posed are: 1) "Am I doing well or badly?" (a performance appraisal focus), 2) "What problems should I look into?" (an attention-directing focus), and 3) "Of the several ways of doing the job, which is the best?" (a problem solving focus).

At all managerial levels in MANU, there was agreement that question No. 1 was handled only partially and that part was "failure feedback." At staff meetings, failures were zeroed in on while accomplishments were taken for granted. The accounting system had data on accomplishments but the management system only focused on the failures. This attitude was very strong in the plant manager and, not surprisingly, was transmitted down through all managerial levels.

With regard to question No. 2, the plant manager focused only on negative results such as too much overtime or too few productive hours. Moreover, his focus was on outcomes and not their causes. His manner of verbalizing "what the problem is" and, therefore, where attention should be directed was perceived by his mangerial team as narrow and over simplified. Some members of the team explained that his meaning and intent was broader and more complete than his words. Upon further questioning, these same people acknowledged that he rarely if ever verbalized his full intent. A typical declaration of the plant manager after a month of high overtime was "no overtime this month." Some of his managers took him literally and some figuratively. The effect seemed to be confusion, anger and protective entrenchment by the lower managers in response to such perceived overreaction.

Regarding question no. 3, problem solving for the best solutions, the accounting system provided information on all the dimensions (produced hours, etc.) but not in a related or intergrated way in which probable consequences could be calculated by production managers or supervisors. The information was not manageably or relevantly packaged. Most managers only considered one or two dimensions and never tried to look at the total interactive effect of all the dimensions in solving problems. Only two high level managers seemed able and interested in an integration of all the dimensions. The chief accountant was one. While he could discuss the integration, he acknowledged at a group session that he was not sure how to weight the various dimensions to minimize total cost for a specific problematic situation. It must be recalled that the job shop nature of the plant is not characterized by firm long-range planning, the scheduling of large orders, or by a stable recurring product base. Small orders and short lead-time orders requiring highly specialized parts, engineering and machining militate against any useful calculation of probable consequences of decisions. There are few constants and many critical variables.

Contrary to Simon's recommendation, the three distinct management accounting functions of performance appraisal, attention-directing and problem solving were not manned by separate full-time accountants. However, the head of production (who was new to this position but not new in the company) expected his managerial subordinates to know how to use the accounting data available for attention-directing and problem solving. He was the one person other than the chief accountant who had the clearest understanding of how most of the dimensions interacted (which probably explains why he was given the Production head job). He expected his managers to be able to manage in a similar fashion. His expectations were highly inappropriate since 1) there was no accountant directly responsible for these management accounting functions to advise the managers, 2) his managers had no previous education or training in how to conceptualize issues in these terms and 3) the present top managerial practice (noted above) exemplified a simplistic, unidimensional use of accounting data.

Norms for the Selection of Accounting Practices

In light of Simon's three functions, Horngren presents five guides or norms for the selection of management accounting practices [Anton and Firmin, 1972]. These norms will be used as an outline for the remaining analysis of the case in point.

Horngren takes as his starting point the concept of relevancy. He defines relevant broadly as that data which will lead to an optimum decision [Anton/Firmin, p. 6]. He distinguishes relevancy (that which is valid and pertinent) from accuracy (precision). Figures can be precise but irrelevant, imprecise yet relevant. A key part of relevancy is timeliness. Highly accurate but stale data are irrelevant because they have no bearing on the decisions facing the recipient. Recalling the job shop character of the case in point, the relevant data available is usually imprecise. Yet, there is neither time nor opportunity to figure ahead of time what information will be needed in order to improve the accuracy since there is so little regularity in the system.

The first norm: Focus the basic design of the accounting system upon the responsibility centers of individual managers. Ideally, particular revenues and costs would be recorded and automatically traced to the one individual responsible for the item (Anton/Firmin, p. 8). Horngren's practical conclusion that the diffusion of control throughout the organization complicates the task of collecting relevant data by responsibility centers seems true in this case. The work flow, communication flow, and decision flow are each complex, due to high interdependence among departments and work units caused by high situational variability.

In a group session with managers and the chief accountant, the following situation came to light. The company has been divided into cost centers, each responsible for submitting a budget. Top management has reviewed and revised them according to goals and constraints. The revised budgets have not normally been communicated back down to the cost centers — a management rather than an accounting breakdown. Further, cost centers have been able to overspend without departmental control. Due to omission rather than plan, control has been left to the chief accountant who cleared requests until the money ran out and then rejected all requests. One result has been that conscientious people who waited and carefully planned their budgets usually found there was nothing left when they submitted their request.

The impact on the lower managers in charge of cost centers has been cynicism and disbelief when they have been told to take ownership and take charge of their cost centers. They do not perceive themselves as having real control or as having been treated as "people in charge." Responsibility has not really been delegated. The words have been said but the actions have not been taken by top management.

Horngren's second norm: Study and delinate individual managers' needs in relation to their sphere of responsibility and the objectives of the organization as a whole [Anton/Firmin, p. 9]. This norm maintains that the management accountant must evaluate the influence of the accounting system on the motivations of individuals. As discussed earlier, the misuse of the accounting system by focusing only on failures and sending down one-dimensional messages, "No overtime," was perceived by lower managers as threatening and oversimplified. They saw that no overtime, meant to save money, could wind up costing the company money. Blanket, unqualified messages made the accounting system appear impractical, unfair and creating more and more burdens for the managers. Managers' needs for help — information and training — to keep overtime down, produced hours up, yield up and efficiency up were not met by one-dimensional statements. Again top management lost credibility.

That lower managers would "protect" themselves and their work units in order to look good on performance reports even to the detriment of the company as a whole is understandable in light of the above. They perceived that no assistance was coming to help them avoid less than optimal decisions, yet such mistakes were not totally their fault. Since blaming and head-hunting would follow failure, survival meant protecting oneself, making sure blame fell somewhere else. Getting the job done followed only after one was protected.

Top management was aware of the above "protecting" "ducking" and "not getting the job done." They were not aware that the messages they were sending down gave good cause for such behavior.

Horngren's third norm: Scorekeeping data should be accurate. This has not been possible for each work unit since no feasible system has been found to track the quality of the job done as work passes from one unit to the next. What is found to be intolerable to specifications might be due to machine error, vendor error, or engineering error. Moreover, as deadlines draw near, tolerances loosen up and what passes now would not have passed yesterday.

In some areas scrap has been reduced. Much of that reduction is believed attributable to a tighter reporting system. In effect, much of the previously reported scrap might well have existed only on paper.

Horngren's fourth norm: Budgets or standards should be understood and accepted as reasonably attainable goals [Anton/Firmin, p. 12]. The previously recounted budgeting practice points out that through the lack of downward communication the budget was not understood and, through the lack of departmental control or cost center control, was not accepted. To paraphrase many supervisors, "the budget is a farce." Similarly, standards or policies deal-

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ing with overtime, produced hours, etc. also have made little sense and have gained little acceptance by lower managers, due primarily to the manner in which they have been presented. The close, direct, active contacts between accountants and operating managers necessary to strengthen understanding and acceptability of standards, budgets and reports as measuring devices of performance [Simon, 1957] appears to be non-existent at MANU below the top management level.

Instead of ducking, entrenching, blaming or doing nothing about the scorekeeping system, the production engineer exercised some responsible initiative in submitting a proposal to the previous head and also to the present head of Production. However, he never received a response to the proposal.

Horngren's fifth norm: The items used to judge performance must be controllable by the recipient. The high interdependency among departments and units at MANU militate against controllability of items. For example, a shipping foreman must manage overtime and yield. However, even it the foreman decides to work overtime for the sake of needed yield, twelve signatures are required to proceed as decided. Some of those signatures come from foremen of other departments such as quality control and maintenance who have to be willing to work overtime with shipping. If they find that they cannot possibly handle more overtime, they may refuse to sign. The shipping foreman then must go up a few levels to secure more leverage to get the needed signatures. If the shipping foreman wins, the quality control foreman loses control of his/her overtime and vice-versa.

Once again, top management has expressed the expectation that the foreman's job is to manage such matters and take control of items such as overtime, conflicts notwithstanding. From the foremen's point of view, they wind up fighting the whole system and possibly messing up fellow foremen while controlling their own times.

Budgetary Control Revisions: A New Plan

The above analysis was presented to, discussed with and challenged by the new (present) head of Production four months after he assumed the new position. He eventually accepted most of the analysis.

Two months later, after much consultation, the new chief accountant presented the following budgeting and budgetary control process for variable expenses.

1. Primary budgetary control is to be decentralized to cost centers. Each center is to track its commitments in terms of "when committed" rather than "when received." In order for "tracking via commitments" to be useful accounting information to managers, each requistion must have as accurate a cost estimate as possible. If cost estimating assistance is needed, managers are expected (and will be held accountable) for seeking assistance and suggestions from the Purchasing Agent or the Industrial Buying Center. This is a new norm for the system.

2. If a cost center manager needs to exceed his budget, he is to go up one level to see if he can "borrow" money for that month from another unit within his boss' division or department. If there is no money at that level, with the help of his boss he is to go up another level and so on, all the way to the plant manager — a form of flexible budgeting.

3. If a center manager does not spend his quota for the month, it can be accrued for the remainder of the quarter. In the past, each center went back to zero.

4. Continuing to reinforce flexibility and cost center responsibility, the new plan states that a manager can choose to spend his budget differently from the initial budget breakdown.

5. Should someone else want a part of a given manager's budget, that manager must be consulted. If he chooses not to release some of his funds but is overruled by his boss, he will receive a formal notice of his new budget to protect him during a future performance evaluation. Further, no one has a right to sign requistion charged to someone else — another new norm.

6. If the total division budget (e.g. for Production) begins to be exceeded, a given manager may be cut back even if he has been in line. Again, formal notice will be given on budget cutbacks and the revised priorities which justify the cutback and protect that manager. Also, Production has the flexibility to "buy" overtime dollars by giving up other variable expense dollars.

7. The new system also attempts to clarify and break-out "uncontrollables." Managers are to take special care to eliminate from their budget print-out items which they do not control such as depreciation. Managers will be held responsible for those items that they and Accounting finally agree are under their control. This practice is in close agreement with Bentley's position on the question of who controls costs and, therefore, where responsibility should be placed. Bentley [1978, p. 195] writes:

> In every company with which I have been involved, depreciation is charged to the activity using the equipment. This is done on the concept that depreciation is the cost of using the equipment. This is not so; depreciation is a financial charge against profits aimed at recovering the original cost of the item not previously charged against profits and will need to be charged whether or not the asset is used. The local activity manager rarely has any say in the financing of capital purchases, yet he is charged depreciation, an item over which he has no control. If he hired the equipment he would only need to pay when he used it but he rarely has the opportunity of choosing whether to hire or buy.

In the remainder of his article, Bentley presents the budgetary control process as being established in reverse of the way it has traditionally been established. He begins by asking "At what level are managers going to be held accountable for costs?" The answer will then determine the company's organization structure, the individual responsibilities of managers, the form and detail of the accounting system, the frequency and timing of data collection and the form of the control reporting system.

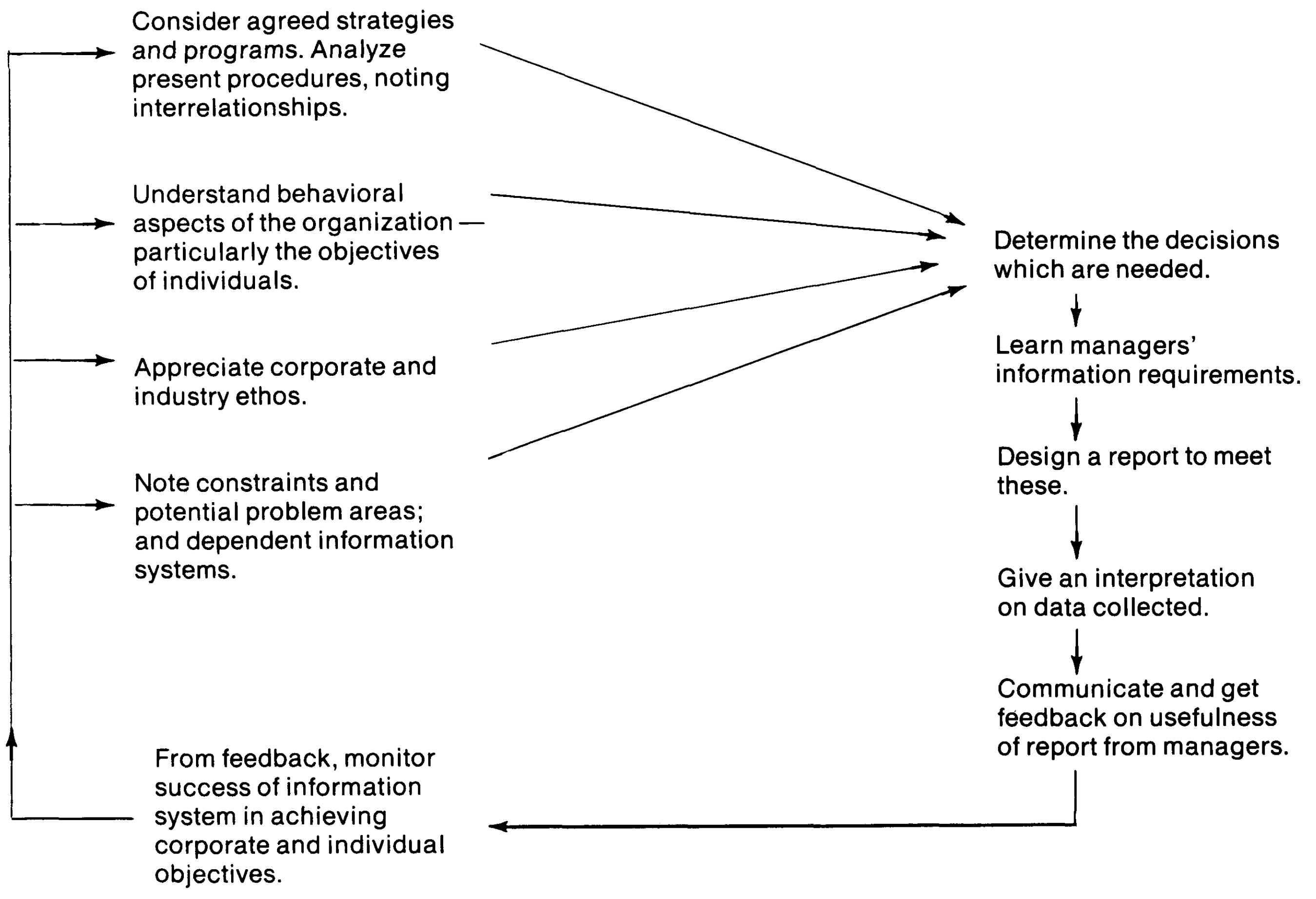
The attention upper-level management gave to the complaints and suggestions of lower-level managers resulted in the new budgetary control system.

The attention upper level management and specifically the new head of Production gave to the complaints and suggestions of lower level managers resulted in the new budgetary control system, evidencing great sensitivity to the role and needs of cost center managers. The new system begins with the question at what level are managers going to be held accountable for costs and builds the rest of the system according to the answer.

Unfortunately, since the system is new, there is no evidence as to whether or not the system works. However, on paper the new system attempts to employ many of the current norms for management accounting, and has been received with great enthusiasm and relief by the managers. It remains to be seen whether both upper and lower management use the new system or revert to previous patterns.

Gifford-Gifford and James [1976] have devised a schematic, diagram for use by accountants and others concerned with effective management accounting. The schematic contains the basic points to be considered (or actions to be taken) for providing management with the relevant accounting information it needs. This schematic has been of service to MANU in terms of monitoring Accounting and Production performance in implementing the new system (See Exhibit 1)

Diagram A.



Note

[1]The usage of the term ownership is colloquial rather than legal or technical. Ownership is defined as an acceptance by an individual or group of full responsibility for the success of a given task no matter what effort is required. The effort required implies going beyond normal procedures and job descriptions if necessary to get the job done. Acceptance of full responsibility implies not blaming anyone else if there is failure.

References

Trevor Bentley, "Who Controls Costs," *Management Accounting,* (May, 1978).

M. B. Gifford-Gifford and D. James, "Providing Management with Information: a Methodology," *Management Accounting,* (February, 1976).

Charles T. Horngren, "Choosing Accounting Practices for Reporting to Management," *Contemporary Issues in Cost Accounting,* Hector R. Anton and Peter A. Firmin (eds.), Houghton Mifflin Company: Boston, 1972.

Herbert A. Simon, *Administrative Behavior,* (2nd ed.; New York: The Macmillan Company, 1957).

Michael A. Novak, *MS, has consulted with business and non-profit organizations in the areas of Organizational Quality and Organizational Effectiveness. He has published in various journals. Mr. Novak expects to receive his Ph.D. in Organizational Behavior in 1980. He received his M.A. from St. Louis University.*