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A NOTE ON THE SURVEY OF PRACTICE IN DIVISIONALIZED GROUPS

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Abstract

Much of what we know about the capital budgeting routines of major corporations derives from postal surveys sent to the head office. This article compares the results gained from such surveys with those obtained from analyses of investment maxmals and interviews with corporate managers in charge of the capital budgeting routines of their groups. The analyses suggest that the value of postal surveys can be substantially improved if information is also collected on to whom and to which parts of the organization an administrative routine is applicable, and on whether it is to be found in a written and approved document; where the routine is applied, by whom, and how strictly.

1. Introduction

There have been a great many postal surveys of the use of planning and control procedures, e.g. project evaluation techniques. Such surveys have e.g. shown an increasing use of the discounted cash flow technique and post-completion reviews, which evaluation techniques are most popular, and that large firms use more advanced techniques than small ones.

The results of postal surveys have been criticized for, inter alia, failure to address the non-response bias in the design of the study (Rappaport, 1979; Pike, 1984), decreasing response rates (Klammer and Walker, 1987), and difficulties in comparing results from surveys based on different samples (Rappaport, 1979; Pike, 1984). A somewhat different criticism was levelled by Aggarwal (1980). He remarked that the response prompted by a postal survey reflects the information available to the manager who answers the questionnaire and the fact that the respondent in large groups does not always know the corporate-wide situation. Furthermore, that corporate level is more concerned with strategic and financial control aspects of capital expenditures than with estimating the profitability of individual investments. Both these biases might contribute to the underestimation of discounting cash flow (DCF) techniques in surveys answered by the head office.

The purpose of this article is to elaborate Aggarwal's criticism and to analyse the problem of surveying major divisionalized groups. The analysis will show how the organizational structure and the existence of written routines affects the results received
from postal surveys sent to the corporate level, and that the value of such surveys can be substantially improved by considering these two factors.

Capital budgeting routines have been investigated with the help of postal surveys (e.g. Scapens, Sale and Tikkas, 1982; Klammer and Walker, 1984; Mills and Herbert, 1987; Pike and Wolfe, 1988; Reichert, Moore and Byler, 1988; Remer, Stokdyk and Van Driel, 1993), analyses of investment manuals (Istvan, 1961; Mukherjee, 1988), interviews (e.g. Mills and Herbert, 1987; Gandemo, 1992), and case studies (e.g. Bower, 1970; Ross, 1986). Each of these approaches has yielded somewhat different results, and this article will show how some of the apparent contradictions can be resolved. We shall concentrate on the results of the many postal surveys sent to the head offices of major corporations, and recent analyses of written routines (Segelod, 1996).

The last study mentioned (Segelod, 1996) was based on interviews in 34 Swedish groups in different industries; with corporate managers responsible for the capital budgeting routines of 33 groups, and on analyses of their investment manuals. The sample consisted of two groups: one composed of major Swedish groups in traditional manufacturing industries, and one from the service industry and smaller groups. Twenty-nine of the manuals came from the first category in which corporate managers in 19 groups were interviewed.

We shall start by showing how the organizational structure, and the fact of whether or not practice is based on written routines, may affect the proper interpretation of the answers received from postal surveys sent to the corporate level. We shall then use a few examples from the capital budgeting area to demonstrate how and why postal surveys, analyses of capital budgeting manuals, and interviews, can yield very different results. This exposition will enable us to formulate a few recommendations for the design of postal surveys.

2. Organizational structure and corporate-wide practice

Almost all major Swedish, U.K. and U.S. corporations nowadays have a multi-divisional structure. There are a few exceptions, notably pharmaceutical corporations and various other research-intensive corporations which have a functional or semi-functional structure.

We can identify three main levels in divisionalized groups: corporate, divisional and business levels, although major groups often incorporate additional intermediate levels. Operational decisions are normally decentralized to business level. Strategic decisions are referred upwards for approval through authorisation levels or some other administrative
procedure. The divisional levels act as linking-pins between lower and higher levels and play a key role in the co-ordination of investments (see Bower, 1970).

Major groups of the type often surveyed have many divisions and companies. In 1994 the Swedish white goods group Electrolux, for instance, had 640 companies, and the Swiss-Swedish electro-mechanical group ABB 1,000. ABB’s 1,000 companies were divided into 45 business areas, which in their turn were divided into five business segments.

Some groups have a heterogeneous structure, e.g. they have somewhat different administrative routines in different divisions. The study of major Swedish groups showed that five out of 34 groups had abolished the group investment manual and allowed the divisions to develop their own written routines. It was felt that the preconditions were so different for the divisions that these needed different administrative routines. Still other groups have allowed lower levels to develop supplementary routines within the framework of those common to the group as a whole; several of these groups had a division which, due to the nature of the business, operated somewhat differently from the rest of the group. The use of a heterogeneous structure does not seem to be unusual among major Swedish groups.

Considering the diversity of such groups it is not surprising to find that the group controller, and other corporate managers, are not always cognizant of which capital budgeting routines are used in each division and Company, and whether group practice is always followed, especially when lower levels have different administrative routines or are allowed to develop supplementary administrative routines within the common framework of the group manual. The group controller knows the routines which are issued by the corporate level and common to the group. These routines are usually compiled in the financial and accounting manual of the group of which the investment manual constitutes one part. However, an individual at the corporate level may be unaware of the extent to which these routines are followed for decisions not needing corporate approval.

3. Written routines standardize and freeze practice

Corporations which have substantial fixed investments, and have decentralized the evaluation of these investments, have in general put their capital budgeting practice on paper in an investment manual. These manuals were introduced in Swedish groups during the late 50s and early 60s (Renck, 1966), somewhat earlier in U.S. groups (Istvan, 1961; Dulman, 1989). The reason is reported to have been (Renck, 1966) the desire of corporate
managers to see more uniform investment requests which could be compared and possibly also rattled. Previously, lower levels had used diverse evaluation techniques, which made it difficult to compare capital appropriation requests.

The introduction of the investment manual pertained to the decentralization of investment appraisals. Even now groups where most appraisals are made by corporate level, as in e.g. Swedish shipping groups, or at staff units, do not usually have an investment manual.

The investment manual standardized practice. It is thereby possible to decentralize the appraisal of investments and still retain some control over how such evaluations are made. It was therefore not surprising to find that the interviews in groups which used a manual and those which did not do so showed that the design of the request and the methods of evaluation used differed far more in the groups lacking written routines.

It is difficult to compare practice over time as the business areas of groups are constantly changing through acquisitions, mergers, and restructuring. Of the major corporations investigated in the three Swedish studies (Renck, 1966; Tell, 1978; Segelod, 1996), only seven remained in relatively unstructured condition throughout. Four of these had introduced a new evaluation technique between 1964 and 1977, and two between 1977 and 1990, or on average once in 30 years; the principal change being the introduction of a DCF criterion. This example illustrates the fact that a group seldom introduces an wholly new evaluation criterion unless it is forced to do so by e.g. a takeover. Written routines not only standardize practice at a specific point in time, they also freeze practice over time.

4. A few examples

Postal surveys, interviews, and analyses of written routines, yielded somewhat different results. A few examples can illustrate how the organizational structure and the role of written routines can influence the interpretation of postal surveys and explain a few of these differences.

Manufacturing vis-à-vis service industry Postal surveys have shown that more manufacturing than service companies use the DCF evaluation technique (Moore and Reichert, 1983; Farragher, 1986; Pike and Herbert, 1988). However, interviews in 24 manufacturing and 10 service groups showed that this was not the whole truth. The DCF technique had been used in all 34 groups. The difference was that in the service groups
such evaluations were few and done by managers or a staff unit. Only the groups which had many capital investments, e.g. engineering and forest groups, had decentralized this form of calculation.

*Inflation* Mukherjee (1988: 31) found in his study of investment manuals that "[o]nly a handful of firms specifically require that all project cost estimates reflect the expected effects of inflation". This is a very different story from that told by postal questionnaires. Hendricks (1983), for instance, reported that 51 per cent of the same Fortune 500 companies considered inflation, and Pohlman and Santiago (1988) that 70 per cent did so. Major British corporation seem still more aware of inflation. Pike and Wolfe (1988), for instance, remarked that 98 per cent of them considered inflation in investment decisions.

So what about Swedish groups. The interviews showed that all 34 groups had considered inflation, and also taxes, at least when evaluating acquisitions, leasing, and major investments. However, most groups have not decentralized these types of calculations which are therefore not described in their investment manuals. Indeed fewer investment manuals treat the tax issue today than in 1964 (Renck, 1966) or 1977 (Tell, 1978), and fewer consider inflation than in 1977. The practice which has evolved is: first, make an appraisal without considering the effects of inflation and taxes. Then if inflation and taxes could be expected to alter the decision such an appraisal is done later on, in cooperation with a staff unit. The reason for this development given by corporate managers was the increased decentralization of investment appraisals and a consequently increasing need to control the assumptions made in the appraisals concerning prices and taxes in different countries. Increased decentralization of investment appraisals has made it necessary to develop a more sophisticated system of pre-approval review.

*Increased use of follow-ups* Postal surveys have also shown an increasing use of post-completion reviews in the U.S. (Scapens and Sale, 1981; Klammer and Walker, 1984; Posey, Roth and Dittrich, 1985) and the U.K. (Scapens and Sale, 1981; Pike and Wolfe, 1987; Neale, 1991): from the 50 per cent recorded by Istvan (1961) in the late 50s to Posey, Roth and Dittrich’s (1985) 83 per cent for U.S. groups, and from 47 per cent in 1985 to 79 per cent in 1990 for U.K. groups (Neale, 1989; 1991).

Interviews in 19 of the largest Swedish groups indicated that all 19 groups required all investment projects, sometimes all investments above a certain expenditure limit, to be followed up. This review was to be made by the unit in charge of the investment and reported to the level approving the decision to invest. Earlier postal surveys of major U.K.
and U.S. groups have shown that only about 50 per cent of these had decentralized the follow-up of investment projects (Scapens and Sale, 1981).

When questioned about the extent to which lower levels also delivered post-completion reviews the one or two years after completion that such fell due, several respondents admitted that parts of their groups sometimes failed to submit them. The problem was expressed in terms of the lack of an incentive. If a unit wants to invest it must fulfil the requirements stipulated in the investment manual and comply with the views expressed in the pre-approval review process before the request for expenditures is granted, but there is no similar incentive to present post-completion reviews, so that the actual frequency of such follow-ups is lower than the written routines indicate. Postal surveys sent to the head office show an increasing use of post-completion reviews, but how should such results be interpreted when the responsibility for making the review is often decentralized at the same time as the corporate level lacks means of sanction for those who do not follow the instructions of the head office?

**Company size** Other surveys have shown that large groups use DCF techniques more often than smaller ones. However, this need not mean that divisions and businesses in major groups always use more advanced techniques than independent groups of the same size. For instance, one Swedish multinational uses the DCF criterion only for investments in excess of £0.5 million, i.e. investments which need group level approval. Another multinational group however which does not have a fixed level of authorization in practice has an equally high level for when such an evaluation is needed. The divisions in these two groups are much larger than many smaller groups using the DCF technique. Surveys of small (Runyon, 1983) and medium-sized businesses (McIntyre and Coulthurst, 1986) have shown that about 50 per cent of the units investigated use a DCF technique. The figure need not be much higher for businesses of the same size in major groups. The fact that a major corporation uses the net present value criterion does not necessarily mean that this criterion is also used by companies and divisions, and in all parts of the group, so that the connection between Company size and the use of advanced evaluation techniques might be overestimated.

**The size and type of investment** Investment criteria differ with respect to the size and character of the investment. Small investments can be evaluated using the payback criterion, larger ones with the payback period and one or several DCF criteria. The investment manual and its routines are primarily intended for the types of investment...
appraisals which are decentralized and are not always applied to the largest investments and to non-routine decisions.

For instance, six of the groups had a special routine for major investments and investment programmes. A Company is supposed to have an investment programme approved before it can apply for funding of the individual investments included therein. In addition, at least 10 of the groups had supplementary routines for major investments, usually investments exceeding £1 to 5 million and needing group board approval. Investment requests for these board level decisions were presented according to a template which gave the evaluator much more freedom to use the evaluation techniques deemed suitable for the type of investment in question. Moreover, the corporate level sometimes overruns the capital budgeting system they themselves have created to obtain approved strategically important investments. Thus even if written routines existed for the evaluation of major investments, which was not the case in all groups, some groups apply these routines less strictly.

Primary criterion Many surveys have tried to discover the principal criterion by asking for the primary measure (e.g. Jones, 1986; Pike and Wolfe, 1988; Cooper, Comick and Redmon, 1992; Reimer, Stokdyk and van Driel, 1993). Some have remarked that e.g. the net present value is used more often for expansion investments and the annuity for replacement investments and asked about the primary measure for different types of investment (e.g. Klammer and Walker, 1984), but to what extent do such primary measures really exist?

Analyses of the 29 manuals of the major groups showed that only 41 per cent of these stipulated when a certain criterion was to be used, and we are then disregarding the groups which had abolished the group manual altogether. Five of the 29 stated that two or several criteria must always be presented, and six delegated to lower levels to choose criteria suitable for the type of investment in question, in two of the manuals after having carefully explained the pros and cons of different criteria. There may be an unwritten rule concerning which criterion is the primary also in these groups, but it should then be remembered that customary routines tend to be less fixed, stable and corporate-wide than those committed to writing.

The use of investment manuals and DCF techniques Postal surveys have shown an increasing use of both the DCF technique (Klammer and Walker, 1984; Canada and Miller, 1985; Pike and Wolfe, 1988; Sangster, 1993), and investment manuals (Klammer
and Walker, 1984; Pike and Wolfe, 1984). Mills and Herbert (1988, p. 77) who carried out both a postal survey and a series of interviews write in their conclusions that these interviews revealed that the techniques required to be used and the importance assigned to them were usually specified within the capital budgeting manual.

If Mills and Herbert are right in their assumption then an increasing use of DCF techniques could be expected to be influenced by an increasing use of investment manuals. Unfortunately there are no U.S. studies of investment manuals which confirm such a connection; nevertheless we can compare the results gained from Swedish surveys of investment manuals and U.S. surveys by postal questionnaires. In 1964 62 per cent of the major Swedish corporations used the DCF technique according to their manuals, in 1977 93 per cent, and in 1990-93 90 per cent. The equivalent figures for Fortune 500 companies are 38 per cent (Klammer, 1972), 64 per cent (Gitman and Forrester, 1977), and 90 per cent (Reichert, Moore and Byler, 1988). Swedish companies seem to have been using more advanced evaluation techniques in the 60s, notwithstanding that these new management techniques were imported from the U.S. and that the U.S. surveys comprise larger companies than the Swedish. The explanation seems to be that the Swedish surveys are based only on those companies which used an investment manual.

The adoption of written routines and an investment manual is connected to the decentralization of investment appraisals and a therefore growing need for standardization and control of investment appraisals. Consequently, a survey of the use of DCF techniques reflects not only the use of such techniques but also the organisational structure of the industry surveyed on the occasion when the survey is made.

5. Concluding remarks

During the postwar period industry has gradually adopted formal criteria to evaluate investments (Heller, 1951; Canada and Miller, 1985; Faulhaber and Baumol, 1988; Dulman, 1989; Baldwin and Clark, 1994). The process has been connected to an increased decentralization of investment appraisals. However, it should be noted that, it is primarily investment decisions and appraisals of a routine character which have been decentralised. Non-routine decisions and the more advanced forms of evaluations are in many corporations still made by a staff. Furthermore, that some groups have decentralized also
the choice of evaluation techniques and capital budgeting procedures, or employ different administrative routines in different parts of the group.

The decentralization of investment procedures involved standardized procedures, and one means to this end has been written routines and the investment manual. Others included improved pre- and post-approval review procedures.

This decentralization of investment procedures makes it very difficult to inspect the practice of major groups and to interpret the many postal surveys made of such groups. Do the answers of the respondents reflect the evaluation techniques used at corporate level and in investment requests sent to corporate level for approval, or the routines issued and decentralized by corporate level through an investment manual, or informal practice, or does the practice vary in different parts of the group?

One alternative is to survey written practice, but this too is associated with problems of interpretation. To what extent are written routines enforced, and must they always be followed before an investment request is approved or should they rather be seen as guidelines.

Another alternative is to survey practice at different levels of major groups. A few such studies have surveyed practice at both corporate and divisional levels (Scapens and Sale, 1981; Mills and Herbert, 1987), and a few others concentrated on work places (Yard, 1987) and plants (Andersson, 1988). The best would of course be to survey practice at the corporate, the business, and intermediate levels. If one must chosen the divisional level might often be best informed of both business and corporate practice.

The advantage of postal surveys is that they allow researchers to collect information from a large sample of corporations; however, the validity of such surveys sent to the head office of divisionalized groups would greatly benefit if they also included these three basic questions: where is the routine applied, by whom, and how strictly.

Firstly, it would be useful to know whether the corporation has a divisionalized or a functional structure, and to which parts of the organization does a certain procedure apply?

Secondly, it would be useful to know who makes a certain type of evaluation, etc.; if it is made by a staff unit or decentralized, and then, to whom it is decentralized.

Finally, it would be useful to know whether a certain routine is to be found in a written and approved document, and to which parts of the group does this document apply. As project evaluation techniques seem to vary more in groups lacking a written routine the existence of such routines can be seen as a measure of reliability.
The examples in this article were taken from the capital budgeting area; nevertheless, the principal problems remain the same also when surveying other types of administrative routines in major groups.

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